CANADIAN HEART HEALTH INITIATIVE:

Process Evaluation of the Demonstration Phase

CONFERENCE OF PRINCIPAL INVESTIGATORS OF HEART HEALTH

Health Canada Santé Canada

WHO Collaborating Centre for Policy Development in the Prevention of Noncommunicable Disease Health Canada

Canadian Heart Health Initiative: Process Evaluation of the Demonstration Phase

Conference of Principal Investigators
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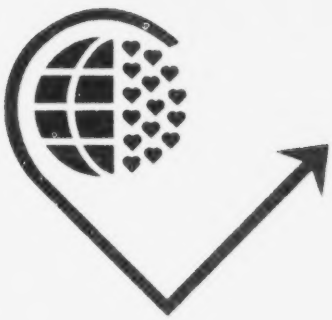

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Canadian Heart Health Initiative: Process Evaluation of the Demonstration Phase

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PREFACE

This report is dedicated to the late Dr. Andres Petrasovits and to the many investigators, staff, volunteers and communities who devoted much time and effort to implementing Heart Health programs and research across Canada.

The Canadian Heart Health Initiative (CHHI) was launched in 1986 as a federal/provincial strategy to tackle the major cause of death, health care costs, and disability in Canada. As part of this strategy, Health Canada, through the National Health Research and Development Program, provided matching funds to all provinces to implement community based cardiovascular disease (CVD) prevention programs. The purpose of these programs was to demonstrate the efficacy of evidenced based public health approaches to preventing and reducing cardiovascular disease in the Canadian population and to build capacity in the public health system for planning and implementing effective provincial and community heart health interventions.

This Report by the Principal Investigators of the Conference of Principal Investigators (COPI) of the Provincial Heart Health Programs provides an overview of the CHHI including a report of the inputs, processes and impacts that were obtained at a national level as well as the reflections of the investigators with an emphasis on impacts of their interventions and the lessons learned through the process of conducting the research and implementing the planned interventions.

The overview of the CHHI includes a summary of the strategies employed, the public health approach that is at the core of the Initiative, the partnership model which was the foundation to the Initiative, and the five phases of the Initiative. It provides the context and environment within which this national initiative operated and the approaches used to monitor the implementation of heart health policy during the period. The evaluation focuses on process rather than outcomes and is consistent with demonstration research where the purpose of the research is to not so much demonstrate effectiveness of interventions with respect to population outcomes but rather to measure the effectiveness of already proven interventions in different populations and environments.

Drawing on the findings of large-scale cardiovascular disease prevention programs in Europe (Puska et al, 1985) and United States (Carleton et al, 1995; Luepker et al, 1994; Fortmann and Varady, 2000), allowed the CHHI, to work within the existing health system infrastructure to test the effectiveness of these successful approaches within the Canadian context, and to focus on building the capacity of the system to plan and deliver such programs. Designing and conducting the evaluation required the participation of all provincial heart health projects and Health Canada and required building a consensus among the provincial heart health programs.

Chapter One provides an overview of the CHHI, including the strategies employed. Chapters Two and Three present data from the process evaluation, including resource inputs to the provincial heart health programs and a profile of the projects undertaken relative to the key strategies used, the risk factors addressed, populations targeted and settings through which interventions were delivered. Chapter Four focuses on the lessons learned and provides an overview of contextual influences, resource issues, organizational management structures, evaluation strategies and technical support provided while Chapter Five presents the conclusions and makes suggestions for future action. The Appendix lists the numerous, articles published and presentations delivered.

Special thanks are due to:

- The late Dr. Andres Petrasovits who provided the vision, strategy and leadership for bringing the CHHI to fruition;
- The Investigators of the CHHI and Health Canada for embarking on and supporting this evaluation as well as to the dedicated people who devoted a great deal of personal time and effort to its design and completion;
- Barbara Riley who prepared the protocol for the acquisition of the process information and trained the provincial data collectors;
- Alison Edwards who set up the Process Evaluation Database, prepared tabulations and participated as a member of the Working and Writing Groups;
- Susan Elliott and Jennifer O'Loughlin who designed and carried out the qualitative analysis of the data;
- Cathy Robinson who prepared initial drafts of the report;
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- Leslie Lawson Flynn, Deborah Baldwin and Shirley Bryan from the Heart Health/WHO Collaborating Centre of Health Canada assembled, edited and proofread this report;
- Monic Lalonde, from Health Canada, who planned, managed and documented the numerous meetings;
- The National Health and Research Development Program (NHRDP) who made a major financial contribution to the provincial heart health programs and organized the scientific site visits for the evaluation of provincial heart health proposals. In particular, Inger Abrams and Elizabeth Mellor were responsible for these processes;
- The Heart and Stroke Foundation of Canada, the Provincial Heart and Stroke Foundations, the Canadian Cardiovascular Society, and the Canadian Coalitions for High Blood Pressure and the Social Surveys Divisions of Statistics Canada, have been main partners in the Canadian Heart Health Initiative. Their support throughout the various phases of the Initiative was critical. Thanks are extended to Arun Chockalingam, Richard Lauzon, Doug MacQuarrie, Ruth Collins-Nakai, and Elinor Wilson;
- The late Mukund Nargundkar from Statistics Canada who provided technical support to the provinces in the design and analysis of the provincial heart health surveys that provided the data which showed many Canadians were at risk for developing preventable CVD and that paved the way for the Demonstration Phase of the CHHI.

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INTRODUCTION

The Canadian Heart Health Initiative (CHHI) is a 15-year initiative consisting of five core phases. The Initiative, a population health approach to a major chronic disease, represents a systematic approach to implementing a countrywide policy at the national, provincial and community levels. This report presents the findings of the process evaluation of the Demonstration Phase of the CHHI, which spanned the years from 1989 to 1995. The report supports policy and program managers in moving beyond *demonstration projects* and into full-fledged implementation of heart health initiatives in communities across the country.

The activities of the CHHI started in 1986 as a federal/provincial public health strategy to address cardiovascular disease (CVD) – a preventable disease that places an enormous burden of illness on individuals, the economy and society in Canada and around the world.

The purpose of the Demonstration Phase Evaluation is to document the resources that went into and the results produced by each demonstration project in order to obtain a better understanding of the application of a public health approach to cardiovascular disease prevention. Monitoring and evaluation activities were built into the Demonstration Phase with design, collection and analysis being a joint effort among key players at the national, provincial and community or project level. The results provide information on the resources contributed to implementing the Initiative, what impact the Initiative had and the context in which the Initiative operated. Consistent with demonstration research this evaluation documents processes rather than outcomes. It makes no attempt to measure changes in the health status of the Canadian population as the time frame of the project and the level intervention ("preventive dose") were not adequate to demonstrate population changes at this level. In community-based research many factors influence both the design and outcomes of the research. This evaluation also documents the reflections of the Principal Investigators on contextual influences, resources, organizational structure, and other topics and lessons learned.

The Conference of Principal Investigators (COPI) of CHHI, were responsible for the design of the evaluation framework and for overseeing the data collection, analysis and interpretation. COPI, which consists of the co-principal investigators of the ten provincial heart health programs, maintains ownership of the database resulting from the process evaluation. The work of directing and managing all aspects of evaluation design, implementation, analysis, and for dissemination of evaluation results was carried out by the National Evaluation Steering Group, a sub-committee of COPI. The Canadian Heart Health Database Centre (CHHDBC), based in the Faculty of Medicine, Memorial University of Newfoundland, was responsible for creating and populating the database and is responsible for its maintenance and for managing access to it on behalf of COPI.

About this Report

This report provides policy-makers and program developers in health, and other fields, with information and insights on the implementation of a countrywide policy. Chapter One provides a background on the Canadian Heart Health Initiative. Chapters Two and Three focus on setting out the contributions and inputs that were devoted to the Demonstration Phase of the CHHI, the scope and nature of the 311 demonstration projects which comprised this Phase and the results and outputs of the projects. Chapter Four presents lessons learned from reflections provided by the Principal Investigators (PIs) on the implementation of the heart health programs. Chapter Five presents the conclusions and suggestions for consideration in implementing similar programs as well as issues for further research. A list of publications, reports, theses, dissertations and presentations is provided in the Appendix.

Process evaluation method

The reference period for the evaluation of the Demonstration Phase is from 1989-1995. The National Evaluation Steering Group developed core indicators to be collected from all provinces through consultations with the PIs of the provincial heart health programs. The core indicators were based on a review of funding proposals submitted by each province to the National Health Research and Development Program (NHRDP). A set of core indicators, drawn from indicators and strategies common to four or more provincial demonstration program proposals, was supplemented by indicators drawn from responses to a questionnaire completed by each province, excluding Ontario. Ontario had already completed the Demonstration Phase in 1994 and had an evaluation plan in place for the five Ontario demonstration centres. Follow-up telephone interviews were conducted to obtain missing or unclear information. COPI members reviewed, both individually and collectively, the evaluation framework and its data.

This evaluation is a retrospective case study of ten provincial heart health programs including activities of Health Canada and The Heart and Stroke Foundation of Canada. The provincial programs consisted of 311 demonstration community and provincial level projects. Health Canada provided technical and policy support to the provincial heart health programs, and served as a link between many of the national and provincial organizations involved in the demonstration phase and the broader Initiative.

The evaluation was designed to collect and analyze data on the processes employed by the ten provincial heart health programs and 311 demonstration projects. Information was collected on the inputs and strategies used, the impacts and outputs of the projects, and lessons learned with a view to informing others about the factors influencing implementation of this multi-level, intersectoral public health initiative.

Data was collected from all ten provincial heart health programs and 311 demonstration projects using standard written questionnaires that were developed by an external consultant with input by the Working Group of the National Process Evaluation. These were the only data collection instruments used. All questionnaires were pre-tested. In addition, data collectors from all provinces attended a two-day training workshop that included a review of all data collection forms and guidelines for completing them. Consultation was provided to data collectors throughout the data collection process.

All data collected was entered into a Microsoft Access database developed by the CHHDBC in Memorial University, Newfoundland. Missing or unclear responses were returned to the respective province for completion or clarification. The database consists of many tables for holding the data, together with forms for data entry, and reports for printing up the data. The analytical process included coding of responses into categories by at least two of the Steering Group members in consultation. Tabulations were produced using the query mechanism within Access where possible with hand tabulations or calculations where necessary.

Data limitations

All data is self-reported data, drawn from personal interviews and on records kept by individual provincial programs and demonstration projects to the end of 1995. Due to the varying provincial start dates this date was not the end of the Demonstration Phase for all provinces, as can be seen in Figure 1.3. For example, four provinces had completed the Demonstration Phase by the end of 1995, three were very close to completion, and three still had between one and two years left to complete this phase of the Initiative. It is important to note however, that this Report gives results for close to 90 percent of the time period of the Demonstration Phase across Canada.

The method and quality of record keeping varied amongst the provinces and communities. In addition, questionnaires were not fully completed by all respondents, resulting in missing data and an uneven data set. For example, information about financial contributions to the programs and projects is particularly uneven as only one-

third of all projects provided useable information on financial and in-kind contributions to the Demonstration Phase. A number of the data limitations are common to retrospective studies. Other limitations are consistent with community studies where controlling for variables is not possible. Despite these limitations the lessons learned from this participatory evaluation with respect to evaluation design and to measuring the impact of implementing a national policy to mobilize provincial health departments, health professionals, voluntary organizations and communities to implement evidence based public health approaches to reducing a major preventable disease cardiovascular disease, are valuable.

Chapter One

OVERVIEW OF THE *CANADIAN HEART HEALTH INITIATIVE*

Canada's vast geographical area is home to more than thirty million people and consists of ten provinces and three territories (as of April 1, 1999). The ten provinces are Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Saskatchewan. The three territories are Nunavut, Northwest Territories, and Yukon Territory. The provinces and territories all have diverse health care systems; all of which are directly affected by health care reform. Cardiovascular disease (heart disease and stroke) is the single leading cause of death and the third highest cause of potential years of life lost (after injuries and cancer) in Canada (Heart and Stroke Foundation of Canada, 1999). It accounts for $20 billion dollars in health care expenses annually (Heart and Stroke Foundation of Canada, 1999) and for more than four million days of hospitalization per year (Heart and Stroke Foundation of Canada, 1997).

The *Canadian Heart Health Initiative* (CHHI) is a five-phase, 15-year effort to mobilize health jurisdictions and organizations in addressing the epidemic of preventable cardiovascular disease (CVD) in Canada. Encompassing policy, research and action, the Initiative was designed as a strategic linkage model employing coalitions to achieve partnerships and collaboration within and across sectors, and across national, provincial and local levels. National criteria and a set of guidelines were established to guide the ten provincial heart health programs towards achievement of a series of heart health and system goals for delivering full-scale heart health programs in Canada.

The Initiative's long-term health goals were to:

- improve the heart health of Canadians,
- reduce premature cardiovascular morbidity and mortality,
- reduce the prevalence of preventable or controllable risk factors for CVD (smoking, high blood pressure, elevated blood cholesterol, diabetes, obesity and sedentary lifestyle),
- improve lifestyle behaviours associated with heart health, and
- improve working conditions, social and physical environments supportive of citizens in making heart-healthy behavioural choices.

Short-term health goals were to increase public knowledge and awareness of the causes and consequences of CVD, as well as to increase the knowledge and awareness of individuals at risk on how to control their CVD risk.

In addition to long term health outcomes and behaviours (5 to 20 years), the provincial heart health programs aimed to influence the way communities support changes, as well as of governments and other organizations in developing healthy public policy. Thus, in addition to health goals the programs set health system's goals as the basis for accountability in the short term.

Health system goals

The CHHI set out to achieve its goals by building capacity within the public health system to address heart health. To achieve this the following health system goals were established: maintaining the provincial heart health programs and the coalitions; entrenching the issue of heart health into the agenda of governments as well as community, voluntary, professional and private sector organizations at all levels; disseminating the knowledge and "know-how" gained through the Demonstration Phase of the Initiative to provincial health departments, community coalitions, private and voluntary sector organizations and Health Canada; and determining the feasibility of employing a public health approach for initiating and delivering integrated heart health programs at the community level.

Strategies for achieving CHHI goals

A set of strategies were established in the policy framework, *Promoting Heart Health in Canada*, (1987) followed by a set of objectives and performance indicators, the *Federal/Provincial Heart Health Initiative – Evaluation Guidelines for Heart Health* (Stachenko, 1991), to facilitate achievement of CHHI goals. The six strategies listed below were identified through consultations with experts in the field. These strategies provided direction to the provincial heart health programs while permitting flexibility of implementation and serving as a link between the policy and evaluation frameworks established at the outset of the Demonstration Phase. The six strategies were:

- Public education
- Community mobilization
- Healthy public policy
- Strengthening preventive health services
- Research and evaluation
- Public health system leadership

In addition to providing direction to the heart health programs in implementing effective programs, these strategies formed the basis for the evaluation framework of the CHHI Demonstration Phase. These strategies also provided direction for identification of the key capacities, identified as being required for the delivery of heart health at the community level. These key capacities were identified as:

- *Knowledgeable, trained teams* – including health professionals within and beyond the public health sector, as well as volunteers;
- *Partnerships at community, provincial and national levels* – partnerships that span sectors (e.g. government and academia), disciplines (e.g. public health nurses and human resource managers), including formal and informal coalitions;
- *Policy development* – ability to develop consensus among relevant stakeholders for establishing guidelines and frameworks to increase knowledge, forge partnerships and stimulate channels for action;
- *Project management capability* – effective management of a complex multi-faceted public health initiative with multiple partners requiring in-kind and monetary contributions, coordination of volunteer and paid staff, multiple layers of accountability, and flexible decision-making;
- *Information systems and corporate knowledge* – ability to establish the tools and systems required to collect, analyze and build on information systems, within the public health sector, and across sectors, jurisdictions and within varying timeframes; and
- *Research and knowledge development* – ability to use current literature and informational databases to build individual and organizational capacity planning and delivering effective heart health programs using a public health approach.

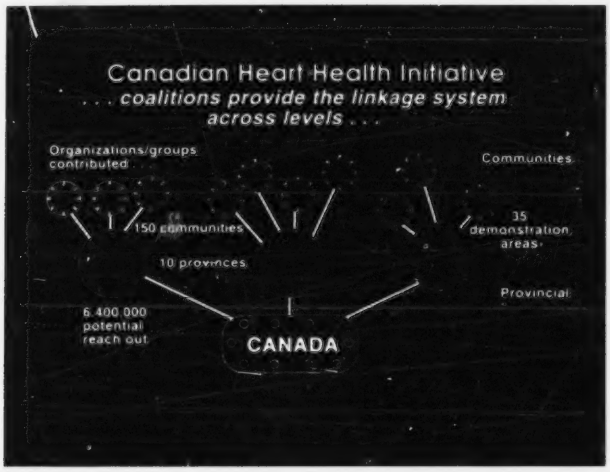
Characteristics of the Canadian Heart Health Initiative

The CHHI is a multilevel strategy spanning national, provincial and community levels. The Demonstration Phase involved over fifty communities, hundreds of organizations and thousands of people from many sectors and professional disciplines. Four key features characterize the Initiative: a public health approach; a partnership model; knowledge development and transfer; and provincial demonstration programs.

Multilevel design

The CHHI builds on linkages to and contributions from the international, national, provincial and community levels. The intent is to improve health at both the community and individual levels and to build capacity at all levels to operate heart health programs over the long term. Figure 1.1 shows the linkage system that expands the national level with the ten provincial heart health programs, the 35 demonstration areas and the 150 communities.

Figure 1.1 – Canadian Heart Health Initiative – the linkage system



International level

In developing the Initiative's overall design and approach, the CHHI drew heavily on experience gained at the international level. In particular, five "exemplary" projects were identified and researched thoroughly, including site visits by provincial PIs. By building on the experiences and lessons learned in other countries, Canada has positioned itself to make a substantial contribution to the further development of heart health internationally. For example, the CHHI has made contributions at major international heart health conferences, including the International Heart Health Conferences in Victoria (1992), Barcelona (1995), Singapore (1998), and Osaka (2001), as well as at the 13th National Conference on Chronic Disease Prevention and Control in Atlanta (1998).

National level

The federal government and national organizations played essential roles in the development and implementation of the CHHI. The federal government, through Health Canada (which included the National Health Research and Development Program, NHRDP), provided funds for the Demonstration Phase of the Initiative, which in turn, were matched by the provinces. The federal government also provided technical assistance in the form of visits to each provincial demonstration site; organized workshops on technical issues, design and implementation of a national process evaluation; established the COPI; and was crucial in the development, maintenance and dissemination of a national database, drawn from the provincial heart health surveys. The Heart and Stroke Foundation of Canada provided entry into a network of potential partners and volunteers, as well as support of a technical, policy and educational nature.

An important aspect of the design was the establishment of criteria for federal/provincial collaboration and co-funding arrangements. Criteria for co-funding ensured that the public health approach was applied to CVD prevention, that a provincial heart health risk factor database was developed, that a process evaluation of the interventions was carried out, and that coalitions and partnerships were established to support implementation of the Demonstration Phase. A

committee of Federal and Provincial Deputy Ministers of Health established terms for provincial responsibility centers that included a site visit by experts to determine the ability of each centre to fulfill its mandate. To ensure a high degree of collaboration and commitment by multiple organizations in each province, the terms also required the establishment of one or more coalitions within each province and matching funding equivalent to that provided at the federal level.

Provincial level

Each province assigned a centre of responsibility to oversee planning and management of the Demonstration Phase. With much of Canada's public health activity housed in provincial health departments, it was anticipated that the health departments in most provinces would take the lead role. In some provinces, universities assumed the lead or served as key collaborators.

While each responsibility centre was required to meet national criteria (see above) before federal funding was provided, considerable flexibility was built in regarding how the provinces would achieve the criteria. Each province developed its own plan outlining specific goals and objectives for all projects; terms and conditions for coalitions and demonstration projects; theoretical foundations for interventions in the form of strategic plans or logic models; and plans for recruiting partners for both coalitions and project activities. Many responsibility centres undertook projects that were province-wide in their reach.

Community level

At the same time, projects were designed locally to meet local needs while meeting the terms and conditions established by each provincial program. In all, 259 individual demonstration projects in over 150 communities contributed to a groundswell of activity aimed at combating heart disease in Canada. Each project was linked to a provincial Heart Health Program in one of 35 demonstration areas and was overseen by a Principal Investigator supported by a multi-disciplinary, intersectoral team.

Irrespective of the selected strategy, the CHHI design dictated that the provincial responsibility centre assume a central management role, particularly to ensure accountability and sustainability of the project and supporting the capacity building that would take heart health initiatives beyond the Initiative's 15-year timeframe. For this reason, provincial leadership centres were encouraged to tailor their programs by building on the strengths and expertise available in their own jurisdiction.

A public health approach

The public health system in Canada varies from province to province. However, the public health approach that underlies it is common to all provinces and territories. It aims to improve the health and quality of life of Canadians throughout their lifecycle. The public health approach has several key characteristics. First, its activities are aimed at the population as a whole and at those at high risk for or already affected by a preventable disease. Second, the public health approach aims to change the environment so as to enable people to make healthy behaviour and lifestyle choices. Third, it strives to identify people who are at risk for experiencing the disease or who are affected by it so they may be treated early and given support to manage and cope with their condition. Finally, the public health approach emphasizes intersectoral collaboration as a means to create environments supportive of heart health. This public health approach forms the basis of the CHHI.

A partnership model

Partnerships are an essential ingredient in the Initiative. Table 1.1 highlights key partnerships in the CHHI. These partnerships facilitated implementation of the CHHI and resulted in a network of organizations to provide sustainability for the Initiative beyond its 15-year mandate. Partnerships were also essential in achieving the capacity building goals, as described in this report. For example, the establishment of provincial coalitions laid the foundation for permanently broadening the type and number of organizations contributing to heart health activities.

Table 1.1 – Key partnerships in the Canadian Heart Health Initiative

Major partners	Key roles
Provincial Health Departments	• Plan, implement and evaluate the provincial heart health programs • Provide matched dollar contributions throughout the duration of the Initiative • Provide technical support to demonstration communities • Establish provincial and community coalitions
Health Canada and NHRDP	• Provide matched dollar contributions • Provide technical and policy support to provincial heart health programs • Organize scientific reviews • Coordinate research contributions
COPI (Conference of Principal Investigators of Heart Health)	• Conduct research • Evaluate demonstration phase • Contribute to national databases
Provincial Coalitions	• Support, manage and/or coordinate provincial demonstration activities
Heart and Stroke Foundation of Canada and Provincial Heart and Stroke Foundations	• Provide volunteer support • Provide technical and educational resources • Provide policy support • Provide access to potential partners and volunteers

Knowledge development and transfer

From the outset, the CHHI recognized the need for implementation research and transfer of technology (i.e. knowledge, tools and skills) across national, provincial and community levels as well as voluntary, professional and academic sectors. Federal funding for the provincial demonstration programs, through the NHRDP at Health Canada, was dependent upon the review of the activities of the provincial programs by scientific experts provided through site visits, workshops and topic specific consultations. The framework for the scientific review was set out in the *Promoting Heart Health in Canada Report* (1987), in the *Evaluation Guidelines for Heart Health* (Stachenko, 1991), and *Positioning CINDI to Meet the Challenges* on integrated approaches to non-communicable disease prevention (World Health Organization, 1992). As well, pioneering work carried out on CVD prevention, in both the U.S. and Europe, formed the basis of the expert review approach adopted by the CHHI. Site visits by national and international experts, particularly from the U.S., played a key role in the transfer of technology to the provincial programs. The scientific review of the provincial heart health programs acted as a measure for program accountability, strengthened the credibility of the CHHI and contributed to sustainability of the programs and projects beyond the Demonstration Phase.

Through these expert consultation processes the existing body of international expertise and experience was "transferred" to key players in the CHHI and utilized by them in building the provincial heart health programs. The CVD Prevention Unit, Health Canada, was instrumental in this paradigm by organizing technology transfer workshops for the PIs of the provincial heart health programs. Workshop topics included conducting population health surveys (provincial heart health surveys), designing and implementing process evaluation frameworks, and effective concepts and approaches in community mobilization and development.

In addition, the CHHDBC was organized in the Faculty of Medicine, Memorial University of Newfoundland, in collaboration with the CVD Prevention Unit of Health Canada. The CHHDBC provided tools and technical support for PIs to carry out epidemiological and evaluation research. The Social Surveys Division of Statistics Canada provided statistical expertise in survey design and analysis of complex survey samples.

A planned, phased approach

Figure 1.2 depicts the five distinct but overlapping phases of the CHHI.

Figure 1.2 – Phases of the Canadian Heart Health Initiative

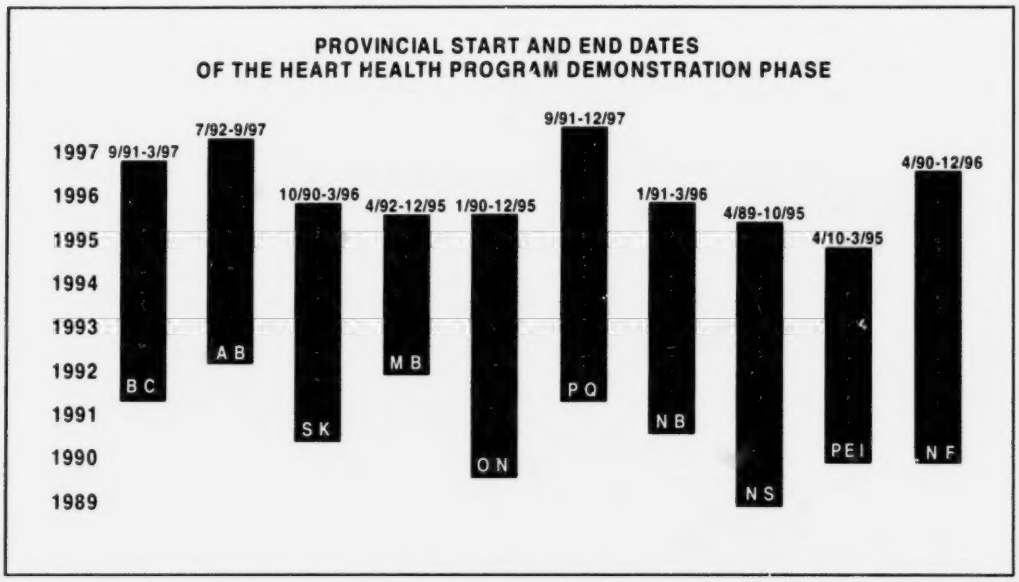
Phase I. Policy development – A federal/provincial working group conducted consultations with dozens of organizations to establish, through consensus, a policy framework that defined the epidemic proportions of cardiovascular disease in Canada and put forward a public health approach as the best way of addressing the situation (*Promoting Heart Health in Canada, 1987*).

Phase II. Provincial heart health risk factor surveys – Between 1986 and 1992, provincial departments of health conducted heart health surveys in all ten provinces. The surveys were designed, implemented and analyzed to meet the need for consistency and comparability at the national level, while at the same time ensuring that each province's information needs were addressed. They were designed to collect risk data, as well as data on blood pressure, blood lipids, anthropometry and lifestyle behaviours. In addition, the surveys collected data on knowledge and awareness of the causes and consequences of heart disease. As well, the surveys were designed to further expand, develop and strengthen the network of interested and knowledgeable professionals and volunteers within and across sectors and jurisdictions, and to enhance their capacity to understand and address the public health implications of CVD.

Phase III. Demonstration – Once the heart health surveys were completed, the provinces turned their attention to planning the demonstration projects. These projects were undertaken primarily to determine the feasibility of implementing a public health approach at the community level. The survey results helped each province to set individual goals and priorities, and encouraged awareness of and interest in the Demonstration Phase of the CHHI. Because survey completion times varied, the timeframe for the Demonstration Phase also varied from province to

province. This flexible approach helped to ensure that both provincial and national goals were achieved. Figure 1.3 illustrates the timeframe of the Demonstration Phase for each province, within the broad nine-year framework of the overall Demonstration Phase (1989-1998).

Figure 1.3 – Duration of Demonstration Phase, by Province



Phase IV. Evaluation – The purpose of the process evaluation of the Demonstration Phase was to document the resources that went into and the results produced by each demonstration project in order to obtain a better understanding of the application of a public health approach to CVD prevention. Monitoring and evaluation activities were built into the Demonstration Phase – with design, collection and analysis being a joint effort among key players at the national, provincial and community or project level.

Phase V. Dissemination – The final phase of the CHHI is aimed at developing the knowledge to ensure that all jurisdictions (federal, provincial and community) can implement heart health programs and interventions. This includes studying the processes and variables that either facilitate or hinder the adoption of interventions. In fact, dissemination is a continuation of the process of building capacity within institutions and organizations at various levels in government and the private and voluntary sectors. Critical to the overall success of the Initiative, this phase serves as a springboard for more broad-based, full-scale implementation to improve the heart health of Canadians.

The CHHI Demonstration Phase

Provincial demonstration programs

The ten provincial demonstration programs constituted the backbone of the CHHI. In keeping with the overall design of the Initiative, the objectives of the provincial programs were two-fold: to plan, implement and evaluate projects to build the capacity for heart health; and to carry out supporting implementation research.

The programs were required to meet a set of criteria for federal funding: matching of federal contributions, scientific evaluation of the various components of the demonstration program; establishment of coalitions and partnerships to implement the demonstration projects; and use of the public health community-based approach to CVD prevention.

These criteria provided flexibility to address provincial and local needs and to make the best use of existing expertise and resources in each province. The fact that the provinces were free to design the appropriate mix of interventions to meet their priorities lead to ten distinct, provincial heart health protocols and to a rich variety of processes from which lessons for implementation can be drawn. These include management approaches, conceptual models, and methods of recruiting/selecting demonstration communities and selecting demonstration projects. These are described briefly below:

Organizational and Delivery Approach and Style. Some provincial programs adopted a centralized approach to management, with a provincial team serving both as manager and delivery agency. Other provinces adopted a decentralized approach to management and delivery, establishing a number of community-based responsibility centres, each of which managed a number of demonstration projects.

Conceptual Models. Each provincial heart health program drew on several social and behavioural theories to develop a conceptual framework for the design and delivery of its demonstration program. Each province used an existing model from other fields or initiatives that best suited their existing structures, capacity and resources, and made modifications to better suit their local needs. For example, in one province, the PRECEDE/ PROCEED model was adopted (Green, Kreuter 1991). PRECEDE is the predisposing, reinforcing and enabling constructs in educational diagnosis and evaluation, and also the first component of health promotion planning framework. PROCEED is the policy, regulatory and organizational constructs in educational and environmental development, and the second component of health promotion planning framework.

Recruitment and Selection of Demonstration Projects. Provincial approaches to selecting demonstration projects also varied, as did the number of projects carried out in each province. For example, in three provinces proposals were solicited from specific organizations to achieve specific provincial goals. The other seven provinces issued province-wide requests for proposals. Moreover, some provinces chose to set out specific goals to be met while others solicited innovative ideas for addressing identified health issues. Although all provincial programs required some form of collaborative effort from potential demonstration project participants, the extent varied greatly from province to province. Provinces also approached the recruitment or selection of demonstration projects in various ways. For example: four provinces called for financial contributions from the organizations that would deliver the project; six of the ten provinces required demonstration projects to sign written agreements; and many provinces set pre-determined terms and conditions for funding and accountability, which included adherence to an annual plan, and designation of ten percent of project funds for evaluation.

In many provinces, criteria for participation focused on the project's "readiness" to carry out successfully their planned activities. Readiness was measured in various ways, including for example, the level of community planning already under way, as well as the availability of resources, expertise and administrative support in the community. Strong leadership was seen as a main selection criterion in some provinces, while others sought an overall mix of projects to reflect the make-up of the province's geographical, economical, cultural and language communities.

Box 1.1 – Provincial coalitions

A major goal of the CHHI was to develop the capacity needed to deliver heart health programs over the long term. For this reason, coalitions were an essential element of the Initiative's design, as is reflected in the criteria set out for program delivery and federal funding. Each provincial program was required to establish at least one provincial coalition; however not all the coalitions became fully functional. Many programs also required coalitions to be established at the community level to manage, deliver or otherwise contribute to the demonstration projects. In total, 41 coalitions were established: eight at the provincial level, and 33 at the sub-provincial level.

From the outset, the role of the provincial coalitions varied considerably and for many the purpose and nature of their work evolved as the provincial program grew and matured. For example, one provincial coalition started out providing strategic planning advice to the provincial program, but over the course of the program, took on more hands-on activities.

There was substantial variation in the composition of the coalitions, largely due to efforts at the provincial level to link organizations that would enhance and strengthen the provincial program and the demonstration projects, as well as build the capacity to continue collaborative work into the future. Each coalition consisted of several public/private/voluntary sector organizations whose mandates varied extensively, including for example, advocating locally and provincially for supportive policies; acquiring community, private industry and government resources for development and implementation activities; and setting program priorities and delivering the programs.

Chapter Two

INPUTS AND CONTRIBUTIONS TO THE DEMONSTRATION PHASE

The process evaluation represents a preliminary attempt to document the investment in heart health. Direct and indirect costs are estimated. These include financial contributions and in-kind contributions from organizations. The Demonstration Phase drew financial and in-kind contributions from a diverse range of organizations. A total of $36 million was contributed over the six years of this Phase. A total of 311 projects were implemented across Canada between 1989 and 1995 through ten provincial-level and 35 community-level programs. As Table 2.1 illustrates, these resources supported both the direct costs of the demonstration projects ($23.5 million, or 65% of total contributions) and the indirect costs related to both general administration of all 311 projects, research, evaluation and program development ($12.5 million, or 35% of total contributions). Most of the demonstration projects (259/311) were community-based, the remaining fifty-two were province-wide in scope. The projects varied in size as measured by cost.

Table 2.1 – Financial and in-kind contributions (cash equivalent), by source and allocation of direct and indirect costs for CHHI demonstration phase (1989-1995)

Source	Contribution ($)	Allocation of costs	Costs ($)
Provincial Departments of Health –		*Direct costs of projects –*	
Total contribution[1]	16.710.000	Total costs	23.696.000
Cash	13.625.000	Community-level programs	13.470.000
Cash equivalent of person years	3.085.000	Provincial-level programs	10.226.000
Health Canada –		*Indirect (non-project) costs –*	
Total contribution[1]	8.840.000	Total costs	12.695.000
NHRDP[2] (cash)	7.316.000	Research, evaluation and program development	9.699.000[4]
Cardiovascular Disease Prevention Unit	1.200.000		
Other Health Canada (cash)	324.000	General administration	2.996.000
Other sources –			
Total contribution[1]	10.897.000		
In-kind (cash equivalent)	8.631.000		
Cash	2.266.000		
Total, from all sources	36.447.000[3]	*Total, direct and indirect*	36.391.000[3]

[1] Includes cash and cash equivalent of in-kind contribution; [2] National Health Research and Development Program.
[3] The discrepancy in 'total' figures are due to different reporting procedures for income and expenses and estimation of in-kind values.
[4] Excludes research and evaluation demonstration projects – these are included in direct costs.

Almost one-half of all contributions (46%) came from the ten provincial departments of health. Health Canada's contribution of nine million dollars represents a quarter of the total resources contributed (24%). Terms and conditions set by NHRDP called for each province to "match" NHRDP funding, dollar for dollar. In fact, the ratio of provincial funding ($17 million) to NHRDP funding ($7 million) is much higher – close to 2.3:1. Contributions from sources other than the federal and provincial governments totaled $11 million, or 30% of all contributions. Four-fifths (nearly $9 million) was in the form of in-kind contributions. Organizations in this category include Non-governmental Organizations (NGOs) with either a non-health or health focus such as the Heart and Stroke Foundation and the Canadian Cancer Society.

Demonstration program goals

Within each province, goals were set at the provincial and community levels. At both levels, the Demonstration Phase aimed to achieve changes in the health system (e.g., partnerships, policy development, infrastructure), the social/physical environment, as well as health behaviour and status. The range of goals illustrated in Table 2.2, lists the categories of goals set by the provincial programs for both provincial-level and community-level demonstration programs. Provincial-level programs tended to focus on organizational capacity building, policy development and diffusion. Community-level programs had a stronger focus on community partnerships, implementation and individual awareness, knowledge and behaviour change.

Table 2.2 – Type of goals set by CHHI demonstration programs

Types of goals	Programs developed at	
	Provincial level (n = 10) (%)	Community level (n = 35) (%)
System Goals		
Community partnerships/collaboration	70	94
Program implementation	50	71
Sustainability	40	37
Building organizational capacity	50	26
Policy development	50	23
Infrastructure developments	30	34
Resource mobilization	30	29
Diffusion	40	9
Building individual capacity	10	17
Management	20	3
One or more system goals	80	100
Social/Physical Environment Goals		
Concern/interest in issues related to heart health	60	69
Social or physical environmental changes	50	46
One or more social/physical environment goals	80	77
Health Goals		
Behavioural change	50	71
Changes in awareness and knowledge	30	71
Changes in risk factors	50	46
Changes in morbidity and mortality	30	29
One or more health goals	70	80

Person-year contributions

Human resource contributions to the heart health programs included staff employed by the heart health program as well as in-kind contributions from participating organizations and volunteers.

Heart health program paid staff

Table 2.3 shows the number of person-years for paid heart health program staff for the Demonstration Phase. The two main positions employed were management and evaluation.

Table 2.3 – Number of person-years devoted to the CHHI demonstration phase, by type of position,[1] (1989-1995)

Type of position	Number of person-years[2]
Management staff (e.g., Project coordinators)	116
Research/evaluation staff	80
Clerical/administration	56
Community developers/mobilizers	26
Managers/coordinators of volunteers	22
Nutrition staff (e.g., dietitians, nutritionists)	7
Communications staff	7
Students (paid)	1

[1] Excludes volunteers; [2] Part-time calculated as half-time

In-kind personnel contributions

Table 2.4 shows the person-years contributed in-kind to the Demonstration Phase. The total contribution of 211 person-years is an underestimate, given that fewer than half (43%) of the organizations provided useable information on their human resource contributions. Nevertheless, it is clear that the provincial health sector was the main contributor of person-years to the Demonstration Phase. The one hundred and forty-four collective person-years (68%) contributed suggests that the provincial heart health programs were successful in mobilizing resources from the health sector to both contribute to and lead the demonstration projects. Interestingly, the private sector contributed a relatively high number of person-years to the Demonstration Phase. While their overall contribution represents only eight percent of total person-years, it is slightly higher than the contribution of person-years by voluntary organizations. Although Table 2.4 does not include the volunteer time devoted to the Demonstration Phase, it must be noted that volunteers played a major role in the delivery of the demonstration projects – with an estimated 10,000 hours contributed across all projects from volunteers serving in a variety of roles.

Table 2.4 – Person-years contributed by organizations making in-kind contributions to the CHHI, by type of organization (1989-1995)

Type of organization	Estimated person-years contributed[1,2]
Government – provincial/municipal/regional	
Health sector	144
Non-health sector	12
Government – Federal – Health Canada	
NHRDP	< 1
Cardiovascular Disease Prevention Unit	< 1
Other	5
Voluntary organizations[3]	16
Private sector (excluding media)	17
Other	
Academic/scientific/research institutions	9
Professional associations/ organizations – health	4
Trade associations/ organizations – non-health	3
Media	< 1
Total	211

[1] Excludes volunteers; [2] Conservative estimate based on response rate of 43%;
[3] Includes health and non-health organizations.

How the resources were used

Table 2.5 provides an overview of how the contributions were put to use. Involvement in program delivery came from virtually every type of organization. Technical advice was also provided by various organizations, although the type of advice varied considerably. For example, Health Canada was involved with various types of contributions: technical advice; coalition building; research and evaluation. The latter included provisional research contributions and evaluation guidelines as well as conducting site visits to all provincial heart health demonstration programs. The provincial and municipal departments of health also organized and hosted a number of conferences aimed at providing program leaders with the technical knowledge needed to manage all elements of their programs from initial strategic planning through to operational planning and management, accountability and evaluation. The provincial programs also contributed technical support, including training to both staff and volunteers in the demonstration projects.

Table 2.5 also shows in-kind contributions in the form of support for promotional activities that came from a range of sources, including the private sector.

Table 2.5 – Pattern of major[1] functions and in-kind contributions to the CHHI demonstration phase, by type of organization and type of function and contribution[2] (1989-1995)

Type of organization	Type of function discharged by the organization					Type of in-kind contribution			
	Program delivery	Access to target groups	Technical advice	Involvement with coalition	Research and evaluation	Promotional support	Meeting space	Educational materials	Travel
Federal Government									
NHRDP			√						
Health Canada	√	√	√					√	√
Other						√			
Provincial/Regional/Municipal Government									
Health sector	√	√	√	√		√	√		
Non-health sector	√	√				√	√		
Heart and Stroke Foundation	√		√	√	√	√	√	√	
Private sector (excluding media)	√	√				√			
Other									
Academic/scientific/research institutions	√		√	√	√		√		
Professional (health) assoc/organizations	√		√	√					
Trade (non-health) assoc/organizations	√		√	√					
Media	√	√	√			√			
Voluntary organizations									
Health	√		√	√		√		√	
Non-health	√	√				√			

[1] Major contributions include the number of discrete contributions made by a category of organization. A tick √ represents where 40% or more of the organizations made that type of contribution; [2] Excludes financial contributions.

Chapter Three

PROCESS AND RESULTS OF THE DEMONSTRATION PHASE

This chapter provides an overview of the range and nature of heart health demonstration projects, including the strategies used, groups targeted, risk factors addressed, and project setting; as well as associated expenditures. It summarizes the key findings related to building capacity and the impact of the demonstration projects on the ability of communities to establish and sustain heart health initiatives over the long term. This is in keeping with the primary focus of the Demonstration Phase, which was to put in place the infrastructure for supporting community heart health but not to sustain individual projects, which inevitably have a defined life span.

The demonstration projects

Strategies

As Table 3.1 indicates, well over half (59%) of the 311 projects focused on public education as the *primary strategy* for addressing risk factors associated with CVD. Significantly fewer projects identified their primary goal as community mobilization (17%); healthy public policy (9%); strengthening preventive health services (9%); research and evaluation (3%); public health system leadership (3%).

Table 3.1 – Number, percentage and total dollar value[1] of demonstration projects in the CHHI, by primary strategy employed (1989-1995)

Primary strategy	Number of projects (n = 311)	% of total projects	Total dollar value[1,2] ($)	% of dollar value for all projects[3]
Public education	185	59	22.444.000	62
Community mobilization	52	17	4.633.000	13
Healthy public policy	29	9	4.403.000	12
Strengthening preventive health services	28	9	2.240.000	6
Research and evaluation	9	3	2.050.000	6
Public health system leadership	8	3	621.000	2
Total	311	100	36.391.000	100[4]

[1] Includes both direct and indirect costs. [2] Calculation based on the proportional weighting of projects providing dollar information (n=118).
[3] Based on weighted total value. [4] Numbers may not add up due to rounding.

Expenditures for heart health projects corresponded closely to the distribution of projects, with almost two thirds (62%) of the total project expenditure of $36,391,000 directed at public education initiatives (see Table 3.1). It should be noted that data collected did not allow for analysis of what types of projects or strategies were more or less costly to employ. However, the average expenditure per project was approximately $117,000, although projects varied considerably in size. It should be noted that this average cost per project includes both direct and indirect (non-project) costs as shown in Table 2.1, which in practical terms means that the average cost of a project includes expenditures associated with capacity building and infrastructure development (indirect costs) and the direct cost of the project.

Public education was a key primary strategy for all major risk factors.
The focus on public education as a primary strategy was consistent across projects addressing each of the three major risk factors – tobacco, physical activity and nutrition. The focus on public education reflects an early stage of development of projects, since public education is important to build awareness and knowledge of heart health as a public health issue. Many of these projects involved activities related to information dissemination, typically through newspapers and local cable television. "Private" media sources, such as school newspapers or project newsletters, were also used.

A family challenge

The "heart health passport" family challenge used a multi-activity approach to encourage families to learn together about the risk factors for heart disease. After completing the range of activities outlined in their passports, family members were awarded follow-up materials, fridge magnets and other information about how to get involved.

While most public awareness initiatives targeted the general population, a number of project groups, often operating as part of community partnerships or coalitions, worked to develop public education resources that addressed the needs of particular sub-groups of the population (e.g. women, school-aged children, farm communities, rural populations). Other awareness-raising initiatives included incentive and/or recognition programs.

Other project strategies focused on community mobilization, public policies and preventive health services.
A population approach requires mobilization of various sectors. Seventeen percent of projects used community mobilization/development as a primary strategy for reaching their target groups. Organizers used initiatives such as community grant programs, in which groups applied for small grants to implement heart health promotion activities within their own membership, and workplace wellness programs designed to encourage employees to assess their own needs for heart health and to develop suitable agendas for action.

Nine percent of projects used healthy public policies as the primary strategy for addressing heart health issues. Initiatives ranged from developing school policies and drafting and submitting a clean air by-law to municipal council, to endorsing the availability of healthy food choices in restaurants and cafeterias. In one community, project organizers developed resolutions for the development of a comprehensive tobacco by-law and advocated for tobacco legislation at all three levels of government. The project's advocacy activities included attending meetings with the federal Minister of Health, making presentations to Bill 199 Standing Committee, municipal councils and local organizations, and endorsing a municipal submission to the Ministry of Health requesting support for tobacco use prevention initiatives.

A multidisciplinary approach

The goal of one community-based intervention was to provide continuing education to health professionals engaged in promoting heart health. The initiative, which comprised four two-hour educational sessions delivered over four consecutive weeks, used a multidisciplinary approach, targeting small groups of physicians, nurses, pharmacists, recreation professionals, health educators, dietitians and social workers. One of the long-term benefits of the project has been ongoing interdisciplinary collaboration and cooperation.

A further nine percent of projects focused on strengthening preventive health services as their primary heart health strategy. These projects included, for example, providing consultation services and resources to workplaces, training volunteers to deliver programs/testing related to heart health, and initiating a model for community development training and conducting the training in locations across the province. Of note, some projects reported that research and evaluation were embedded in many projects, but very few were classified as research and evaluation projects (see Table 3.1).

Almost half of all projects used community mobilization as a secondary strategy.

Respondents were asked to identify secondary strategies for each project. As Table 3.2 shows, close to half (47%) of the respondents identified community mobilization as the secondary strategy used in their projects, thus demonstrating that mobilization is a central part of delivery of heart health programs. Community mobilization initiatives included, for example, kick-off events and Canada Fit-week activities designed to build community support for physical activity, and activities aimed at encouraging community members to take action on smoking issues. In addition to being the dominant primary strategy, public education was cited as a secondary strategy in 19% of projects, strengthening preventive health services in five percent of projects and public health leadership in eight percent of projects.

Table 3.2 – Number of CHHI demonstration projects, by primary and secondary strategy employed (1989-1995)

	Secondary strategy								
Primary strategy	**Public education**	**Community mobilization**	**Healthy public policy**	**Strengthening preventive health services**	**Research and evaluation***	**Public health leadership**	**None**	**Total number of projects**	**% of total projects**
Public education	-	121	11	10	-	7	36	185	59
Community mobilization	37	-	1	4	-	6	4	52	17
Healthy public policy	10	11	-	1	-	5	2	29	9
Strengthening preventive health services	9	10	-	-	-	4	5	28	9
Research and evaluation	-	-	-	1	-	2	6	9	3
Public health system leadership	3	4	-	-	-	-	1	8	3
Total number of projects	59	146	12	16	-	24	54	311	100
% of total projects	19	47	4	5	-	8	17	100	

*The data collection system used did not allow for acquisition of information on research and evaluation as a secondary strategy

Risk factors

The vast majority of heart health demonstration projects addressed the behavioural risk factors associated with CVD rather than physiological risk factors such as cholesterol. This focus can in large measure be attributed to the orientation of the public health agenda that stresses a primary prevention approach.

Most projects addressed more than one risk factor.

In keeping with the overall design of the Demonstration Phase (i.e. a multi-factorial approach), most heart health programs acknowledged the strong inter-relationships among the risk factors related to CVD. Notably, many programs focused initially on a single risk factor and subsequently added projects relating to other risk factors. As indicated in Table 3.3, more than one-third (38%) of heart health programs addressed four or more risk factors, while a further 16% addressed three risk factors. Less than one-third (32%) of projects focused their efforts on a single risk factor. Table 3.3 indicates that more than two-thirds of all expenditures went to projects addressing two or more risk factors.

Table 3.3 – Number, percentage and total dollar value[1] of demonstration projects in the CHHI, by number of risk factors addressed (1989-1995)

Number of risk factors addressed	Number of projects (n = 311)	% of total projects	Total dollar value[1,2] ($)	% of dollar value for all projects[3]
1	99	32	11,706,000	32
2	32	10	2,872,000	8
3	49	16	6,610,000	18
4 or more	119	38	13,834,000	38
General heart health	12	4	1,369,000	4
Total	311	100	36,391,000	100

[1] Includes both direct and indirect costs; [2] Calculation based on the proportional weighting of projects providing dollar information (n=118); [3] Based on weighted total dollar value.

Survey shows low awareness

A national risk factor survey conducted in 1992 showed most Canadians have limited awareness about the factors that contribute to CVD ... (Canadian Heart Health Surveys: A Profile of Cardiovascular Risk monograph, CMAJ, 1992.)

Multiple risk factor projects often used public education strategies.

Many of the projects addressing multiple risk factors used public education strategies to raise general awareness about heart health issues. This was accomplished in a number of ways: by highlighting multiple risk factors at health fairs; organizing heart health awareness campaigns in workplaces; and by linking specific risk factors in public education initiatives. One project group focused on stress and tobacco in its public education programs for youth, emphasizing positive options to smoking for responding to and coping with the stress in their lives. In another project, local volunteers and businesses supported a community garden as a way of promoting fitness and raising awareness about nutrition issues.

The majority of projects focused on tobacco, physical activity and nutrition.

Table 3.4 demonstrates that the majority of heart health projects focused their efforts on one or more of the three primary risk factors for CVD: tobacco (60%); physical inactivity (68%) or poor nutrition (73%). Even though the responses to this question allowed for multiple response, (i.e. a project could have more than one risk factor and the dollar value for a project could be represented in more than one risk factor row), the highest proportional dollar value (76%) was placed on projects that included nutrition as a risk factor, while physical activity projects accessed 67% of the dollar value.

Table 3.4 – Number, percentage and total dollar value[1] of demonstration projects in the CHHI, by risk factor (1989-1995)

Risk factor	Number of projects[2] (n = 311)	% of total projects[2]	Total dollar value[1,3] ($)	% of dollar value for all projects[2,4]
Tobacco	187	60	23,099,000	63
Nutrition	228	73	27,704,000	76
Physical activity	210	68	24,368,000	67
Diabetes	32	10	4,788,000	13
Obesity	87	28	9,361,000	26
Stress	100	32	11,625,000	32
Hypertension	84	27	9,588,000	26
Cholesterol	34	11	1,767,000	5
Self-esteem	11	4	1,001,000	3
General heart health	35	11	4,000,000	11

[1] Includes direct and indirect costs; [2] Multiple responses for choice of risk factors were allowed, e.g. 73% or 228 projects dealt with nutrition as one of the project's risk factors; [3] Calculation based on the proportional weighting of projects providing dollar information (n=118); [4] Based on weighted total dollar value.

Table 3.5 provides an overview of the most frequently cited activities by risk factor and setting for both provincial- and community-level programs. Projects addressing tobacco as a risk factor focused on special events, training, smoking policies and legislation. As might be expected, provincial-level programs were more likely to be involved in activities involving policy/advocacy.

Physical activity initiatives included mall walks, fitness classes and walking clubs.

While many physical activity initiatives were part of large-scale, comprehensive heart health programs undertaken in schools, workplaces and the wider community, others were specifically directed at improving physical activity among the general population or selected target groups. These initiatives included, for example, mall walks, walking clubs, fitness classes, fitness challenges and related special events. In one targeted community project, organizers took donated bicycles, refurbished them and distributed them to low-income families in the neighbourhood to encourage member's participation in physical activity. Activities such as this, which target population sub-groups, are consistent with a population health approach to managing health issues. The most frequently cited physical activity initiatives were special events, awareness information promotion of community resources and information and training for primary care providers (see Table 3.5).

Operation Fitness

One project involved converting the operating room at a local health clinic into a fitness centre. The centre, which was open to all members of the public offered stationary fitness equipment as well as a variety of fitness training sessions.

Table 3.5 – Most frequently cited activities for provincial-level and community-level CHHI demonstration projects, by risk factor and setting (1989-1995)

Risk factor and setting	Most frequently cited activities		Provincial-level activity different than community-level activity
	Provincial-level programs	Community-level programs	
Tobacco			
Schools	Special events	Special events	
Workplaces	Smoking policies/municipal bylaw re: prohibiting smoking	Educational messages	√
Health care settings	Training for service providers in smoking cessation	Training/information for primary care providers	
Community at large	Provincial legislation for policies	National non-smoking week	√
Nutrition			
Schools	Food policies	Healthy eating messages	√
Workplaces	Healthy eating messages	Healthy eating messages	
Health care settings	Patient educational materials/ training for primary care providers	Training for primary care providers	
Restaurants	Training for personnel	On-site ads for healthy food choices	√
Grocery stores	Point of purchase information/displays/ store tours	Store tours	
Community at large	Media campaigns	Skill-based programs on healthy eating	√
Physical Activity			
Schools	Special events/policies	Special events	
Workplaces	Physical activity messages	Physical activity messages	
Health care settings	Training for primary care providers	Information for primary care providers	√
Community at large	Media campaigns/promotion of community resources	Promotion of community resources	
Multiple Risk Factors			
Schools	Educational materials on heart health	Educational materials on heart health	
Workplaces	Educational messages on heart health	Educational materials on heart health	
Health care settings	Guidelines/training for primary care providers	Patient education materials	√
Community at large	Media campaigns	Special events promoting heart health	√

[1] If more than one activity has the highest score. all are listed; [2] Includes both project and non-project activities.

Nutrition activities included cooking courses and restaurant tours.

Most projects addressing nutrition as a risk factor for CVD were targeted either to the general population or to adults. While many of these projects were relatively traditional in their approach (e.g. heart smart cooking courses, restaurant displays/tours), a few used innovative methods to mobilize community awareness and support. For example, one project educated community champions about the role of nutrition in heart health, equipping them to share their knowledge with others in the community. The most frequently cited nutrition-related activities included healthy eating messages training for primary care providers and store tours (see Table 3.5).

Target audience

As Table 3.6 shows, the vast majority (85%) of heart health demonstration projects were directed at end users: members of the general population (43%); adults aged 15 years and over (19%); children and youth (15%); and women (7%). The remaining projects (15%) targeted intermediaries, including service providers and policy makers. The total dollar value of projects was similarly distributed with almost 90% of project resources directed to institutions aiming their projects at end users. Within this group, the largest share of resources went to projects targeting the general population.

Table 3.6 – Number, percentage and total dollar value[1] of demonstration projects in the CHHI, by target group (1989-1995)

Target group	Number of projects (n =311)	% of total projects	Total dollar value[1,2] ($)	% of dollar value for all projects[3]
End users				
General population	134	43	12,538,000	34
Adults (15 years and over)	60	19	9,310,000	26
Children and youth	47	15	5,041,000	14
Women	22	7	5,183,000	14
Intermediaries				
Service providers only	27	9	2,359,000	6
Policy makers only	7	2	771,000	2
Service providers and policy makers	13	4	1,189,000	3
Other intermediaries	1	< 1	–	–
Total	311	100[4]	36,391,000	100[4]

[1] Includes direct and indirect costs. [2] Calculation based on the proportional weighting of projects providing dollar information (n=118).
[3] Based on weighted total dollar value. [4] Numbers may not add up due to rounding.

Most projects targeted the general population.

Members of the general population were the target audience for most projects addressing the three main risk factors: tobacco use, physical activity and nutrition. The majority of these projects involved the development and/or dissemination of information and/or materials designed to educate the public and to raise awareness about the various risk factors for CVD. For example, many tobacco-related projects used newspapers and electronic media to disseminate information about the health hazards associated with smoking. In one province, organizers developed a media campaign designed to inform middle to lower income residents aged 25 to 44 about lifestyle changes that would reduce the risk of heart disease. The campaign involved television, radio and print to convey the message that not smoking, enjoying regular physical activity, eating healthy food and having regular blood pressure checks can improve quality of life and reduce the risk of CVD.

Children and youth were the targets for many tobacco-related initiatives.

Specific subgroups of the general population including, for example, farmers, people living in low-income neighbourhoods and people living in rural areas, were the focus of many tobacco-related projects. Notably, children and youth were the target of a relatively high proportion (16%) of tobacco-related projects. Most of these projects were part of a larger comprehensive heart health program, often school-based, which addressed multiple risk factors and involved networking with key stakeholders, building partnerships, integrating activities within existing systems (e.g. school curricula), and promoting sustainable environmental change (e.g. smoking policies for schools and workplaces). A limited number of youth-directed tobacco initiatives included a "train-the-trainer" component, designed to teach young people how to act as peer counselors on issues related to heart health.

Changing school culture

One comprehensive school heart health project achieved considerable success in moving towards sustainability and establishing heart health as part of the school culture. The model was introduced to 24 additional schools in the area.

Physical activity projects focused on the general population and specific sub-groups.

Projects targeting the general population used a variety of information dissemination methods to get physical activity messages out to the general population, often as part of a more general message about heart health. For example, one project used the media to profile "local heroes"; people who shared their positive lifestyle changes with respect to physical activity, nutrition and smoking. Although relatively few projects identified specific physical activities, cross-country skiing, mall walks and community walking routes were among the activities identified.

Multi-ethnic heart health

One program targeted children in elementary schools in a low-income, low-education, multi-ethnic and urban community. Activities included the development and implementation of a classroom-based, 20 hour/year school curriculum to increase knowledge and improve attitudes and behaviours related to heart health, an after-school physical activity club for girls, a heart health board game and multi-ethnic dinners for children and their parents. Other activities targeted teachers and parents.

The public health approach tailors interventions to specific populations. Sub-groups of the general population – including people living in rural, industrial and low-income areas, and members of low-income groups – were often the target of physical activity initiatives. Seventeen percent of physical activity projects were also directed at children and youth. Of these, the vast majority involved physical activities that were incorporated as part of comprehensive school-based heart health programs. Although most projects were geared toward youth and children in general, a small number targeted particular subgroups such as young females from low-income neighbourhoods and farm youth. Specific activities aimed at young people included a camp walking program, a skipping challenge, a basketball camp and a healthy youth club.

Few projects targeted women's needs.

Women were the target group in only a small proportion (7%) of all projects. Of the seven projects that specifically addressed women's needs for physical activity, one focused on raising awareness of women's risk for CVD. Another project was part of a comprehensive family-based heart health program, while two others involved support groups/drop-in sessions for women attempting to lose weight and/or increase their physical activity.

Most nutrition projects were aimed at the general population.

Members of the general population and adults were the targets of the majority of nutrition-related projects. Most often, projects aimed at the general population focused on the development and/or dissemination of information designed to raise awareness about the importance of nutrition as a risk factor for CVD. Among the materials developed were a leadership video, "Heart Smart" cookbooks, a heart health resource directory, television/media kits, a web-based home page and a telephone hotline. Dissemination took a variety of forms—from development and distribution of newsletters to more comprehensive multi-media strategies using television, radio and newspapers. A small proportion of projects identified particular sub-groups of the general population as their target group (e.g. community gardens/ kitchens in low-income neighbourhoods and initiatives targeting rural and/or farm communities).

Settings

Heart health projects took place in a wide variety of settings with the highest proportion in schools (38%), community agencies (36%) and workplaces (26%), and the fewest in social/recreational facilities (12%), the community at large (15%) and food service outlets (19%). Other project channels included health care settings (21%) and the media (20%) (see Table 3.7). Table 3.5 provides an overview of the most frequently cited activities by risk factor and setting. Notably, the dollar value of projects was more evenly distributed across project settings than were the actual heart health projects, with schools (35%), community agencies (32%), media (27%), workplaces (27%), food service outlets (25%) and health care settings (19%) all accounting for between 19% and 35% of the total value of projects. It is important to remember that projects can be counted in more than one setting.

Table 3.7 – Number, percentage and total dollar value[1] of demonstration projects in the CHHI, by channel/setting (1989-1995)

Channel or setting	Number of projects[2] (n =311)	% of total projects[2]	Total dollar value[1,3] ($)	% of dollar value for all projects[2,4]
Schools	119	38	12.566.000	35
Community agencies	112	36	11.823.000	32
Workplaces	82	26	9.882.000	27
Media	63	20	9.816.000	27
Food service outlets	58	19	9.049.000	25
Health care settings	65	21	6.878.000	19
Community at large	46	15	5.276.000	14
Social/recreational facilities	38	12	3.615.000	10
Other	12	4	961.000	3

[1] Includes direct and indirect costs; [2] Multiple responses for choice of channel/setting were allowed. e.g. 26% or 82 projects dealt with workplaces as one of the project's delivery channels/settings; [3] Calculation based on the proportional weighting of projects providing dollar information (n=118); [4] Based on weighted total dollar value.

Schools were a popular project setting.

Schools were a popular setting for tobacco-related projects. More than two-fifths (42%) took place in schools generally as part of a comprehensive school-based heart health promotion program involving multiple risk factors and activities. School-based initiatives were also commonly linked with broader community heart health initiatives such as active living programs for farm communities or risk assessments at health fairs. Both community- and provincial level programs focused on special events as a primary activity for raising awareness about smoking in schools (see Table 3.5).

Other, less broadly based activities focused on developing and disseminating resources appropriate to youth. Heart health promoters frequently worked with school staff to develop curriculum resources or other materials (e.g. a colouring book for grade one students) designed to get the non-smoking message out to students. In one community, parents, children and local recreation officials worked together to develop no-smoking policies for local skating/ hockey arenas.

A comprehensive approach

One comprehensive school program incorporated initiatives related to curriculum instruction, healthy physical and social environments, and health and service components. Project organizers established steering committees and task groups, and involved parents and community agencies in planning and project implementation. Among the program's outputs were communication and recognition strategies, as well as a range of lifestyle skill/behaviour initiatives designed for both school and community settings.

Schools were also a common setting for nutrition-related projects. Most focused either on raising awareness about nutrition as a potential risk factor for CVD, often as part of a comprehensive school-based intervention, or on providing healthy nutritional alternatives in the school cafeteria. Many school-based initiatives focusing on physical activity were conducted as part of a comprehensive school-based health promotion program, several of which focused on raising awareness of multiple risk factors as they relate to heart health. While most projects were aimed more generally at advocacy and support for physical activity within the school system, specific activities included a bike rodeo and a basketball camp. Some projects involving a "train-the-trainer" component were aimed at staff rather than students. As Table 3.5 shows, provincial-level school programs frequently focused on changing policies related to food, while community-level programs emphasized healthy eating messages.

Many projects took place in the worksite.

Worksites were a popular setting for tobacco-related health promotion activities. These projects were fairly evenly divided between initiatives aimed at information dissemination, awareness raising and individual risk factor assessment (e.g. at health fairs). Several workplace projects involved training others (i.e. professional trainers or volunteers) in smoking cessation skills. As Table 3.5 shows, the most frequently cited activity at the provincial level related to changing workplace-smoking policies, whereas educational messages were the focus at the community level.

Heart health goes to work

One project involved the development of a self-directed resource manual entitled "Heart Health Goes to Work." The manual provided a menu of simple and inexpensive heart health promotion activities for employees aimed at increasing their participation in physical activity, and promoting good nutrition, stress management, smoking cessation and environmental changes in the workplace.

Workplace nutrition projects typically focused on individual risk factor measurement and follow-up, or on the dissemination of material designed to raise awareness through activities such as distributing pamphlets or hosting cooking demonstrations and food tastings. Less frequently, activities targeted food service outlets (e.g. grocery store tours and demonstrations). Worksite physical activity programs generally took on one of three forms: individual risk factor assessment and counseling; health fairs; or development and/or dissemination of information designed to raise awareness of heart health risk factors, particularly physical activity.

The broader community was an infrequent project setting.
Relatively few projects identified the community at large as a primary setting for activities. Most community-level tobacco-related projects involved information dissemination (e.g. through community newsletters, campaigns such as National Non-Smoking Week, toll-free phone lines) and awareness raising (e.g. through meetings/ consultations on heart disease risks for women). As with other activities, many community-based projects were part of a large-scale heart health program involving a variety of activities, strategies, target groups and settings. For example, in the "Give Kids A Chance" project, several communities collaborated on multiple activities designed to help children develop healthy habits early in life. As Table 3.5 shows provincial-level activities took aim at provincial legislation regarding smoking.

Community heart health

About 700 families living in a low-income, low-education housing complex were the target of a nutrition and physical activity program designed to address the high prevalence of obesity. Among the activities and other aspects of heart health were aerobics classes, a walking club, nutrition and food preparation classes for adults and children, information sessions, smoking prevention program and line dancing. Some of the most successful elements of the program, including community gardens, community kitchen and the walking club, have been disseminated to communities across the province.

Most physical activity projects conducted in community agencies were designed either to raise awareness or to deliver specific programs. Awareness initiatives generally involved the development and/or dissemination of resources (e.g. a video on community leadership training). Organizers for one project developed a community heart health information system that was used to track community health initiatives. Physical activity programs, such as mall walking, fitness classes and walking clubs, were often conducted in conjunction with nutrition counseling. One project established a heart health centre offering exercise programs, lifestyle clinics, and cooking and nutrition classes.

Capacity building

One of the primary goals of the heart health demonstration projects was to strengthen the capacity of communities to engage in sustainable activities aimed at improving heart health. While the demonstration projects themselves were not intended to be sustainable, they were designed to establish the infrastructure necessary for sustained future action. A variety of indicators were used to assess the impact of the demonstration projects on capacity building, including partnering/networking among agencies and organizations, training and acquisition of knowledge by local representatives, and the development of an inventory of publications designed to inform and support initiatives on an ongoing basis.

Networking was key
An important finding from the process evaluation was evidence of the collaborative approach that fostered the development and/or enhancement of networks and partnerships. Table 3.8 shows the number and percentage of collaborating organizations taking part in heart health projects. Almost 95% of the 311 projects involved two or more organizations, and more than one-fifth involved seven or more organizations. Resources were similarly distributed, with 96% of the total going to projects with two or more organizations. Notably, a relatively high proportion of resources (33%) were devoted to projects with seven or more collaborating organizations (22%).

Table 3.8 – Number, percentage and total dollar value[1] of resources devoted to CHHI demonstration projects, by number of participating organizations (1989-1995)

Number of participating organizations	Number of projects (n =311)	% of total projects	Total dollar value[1,2] ($)	% of dollar value for all projects[3]
1	17	5	1,299,000	4
2-6	225	72	22,961,000	63
7-11	51	16	7,577,000	21
12+	18	6	4,554,000	13
Total	311	100[4]	36,391,000	100[4]

[1] Includes direct and indirect costs. [2] Calculation based on the proportional weighting of projects providing dollar information (n=118); [3] Based on weighted total dollar value. [4] Numbers may not add up to total due to rounding.

In many communities, the heart health demonstration programs resulted in the creation of new networks of organizations and the enhancement of existing networks. Organizers felt strongly that these networking activities were important and some altered their overall organization and management to encourage intersectoral and organizational collaboration. In addition, many of the more formalized aspects of these networks, including steering committees and issue working groups, continued to meet and undertake projects after the Demonstration Phase was completed. The incorporation of networking and coalition building into the day-to-day functioning of community organizations is likely to be a long-term positive contribution of the CHHI.

Projects helped to build knowledge and develop skills among consumers and intermediaries.

One of the most important ways of building community and organizational capacity to sustain heart health initiatives is to develop relevant expertise within the community. Project organizers received a range of technical support in implementing the heart health projects, including training and assistance in planning, long- and short-term strategy-making and visioning and operational processes. Other technical support included the provision of educational and reference materials through resource centres.

Provincial heart health program personnel also received training or expert assistance in techniques for data collection, analysis and evaluation. Training in management skills, such as conflict resolution, was also provided. According to organizers, training and other technical support was most useful when it "left skills in the community", a prerequisite to community development and capacity building. In some cases, coordinators facilitators were located within the host communities, transferring skills to the communities through workshops and hands-on activities.

Reflections from PIs...

"The overwhelming top-rated accomplishment... was the establishment of a tighter network of professionals province-wide."

"Policy and decision-makers in the health renewal process should be comforted by the results of the Demonstration Phase which provides evidence of successful collaboration among public and private sectors of our health service and consumer products industries, and governmental sectors".

"Anecdotal information to date indicates that some coalition members have already altered their "way of working" within their organization, based on their experiences within the "program" in terms of inclusion, use of resources, committee functioning and strategies".

Notably, many of the skills respondents obtained were not limited to the heart health arena, but were more widely applicable to other health-related and/or community building projects. Many of the information products developed as part of the demonstration projects also helped to contribute to capacity building by promoting knowledge and skill development in the community. The difference between capacity building and public education is important. Program planners and providers (e.g. intermediaries) are targets for capacity building, while the end-users (e.g. consumers) are targets for public education. As Table 3.9 shows, well over two

million brochures and fact sheets were distributed to consumers and intermediaries as part of the Initiative, as well as 680,000 newsletters, almost 300,000 self-help guides, 30,000 implementation/training guides, and 90 guidelines.

Table 3.9 – Number of items developed and estimated distribution to consumers and intermediaries, CHHI demonstration phase (1989-1995)

Product	Consumers (end users)		Intermediaries[1]	
	Number of items	Estimated number distributed [2]	Number of items	Estimated number distributed [2]
Brochures and fact sheets	190	2,060,000	30	26,600
Newsletters	20	607,000	10	82,000
Give-away promotional items	210	302,000	50	54,700
Self-help guides	40	296,000	10	2,200
Resource inventories/directories	40	193,000	30	12,200
TV spots (< 30 minutes)	110	50,200[3]	3	6
Health assessment/screening	30	34,100	3	750
Implementation/training guides	20	22,200	80	7,800
Radio advertisements	150	23,500[3]	2	2
Displays	170	3,300	40	270
Video	30	700	3	0
TV shows (30 minutes or more)	40	110	0	–
Guidelines	0	–	1	90

[1] Intermediary is defined as any of service providers, policy makers and other intermediaries (e.g. heart health coalition members, heart health staff, community groups, community volunteers, member agencies, demonstration sites, community members/leaders/coordinators, NHRDP site review teams). [2] Number weighted to reflect the total number of items; [3] Number of times aired.

Table 3.10 shows the range and number of heart health topics circulated in magazines and newspapers. More than 750 articles were prepared and in excess of 25 million copies were distributed. The majority of articles (480) focused on multiple risk factors or general heart health issues. Nutrition, tobacco and physical activity were the focus of between 80 and 85 articles each.

Table 3.10 – Number of newspaper and magazine articles and estimate of number circulated, by topic of article, CHHI demonstration phase (1989-1995)

Topic of article	Number of articles published	Readership[2]
Multiple risk factor/General heart health [1]	480	15,156,000
Nutrition	85	3,667,000
Tobacco	84	2,502,000
Physical activity	80	2,187,000
Obesity	14	1,791,000
Stress	7	135,000
High blood pressure	3	71,000
Cholesterol	3	63,000
Total	756	25,572,000

[1] General heart health used if article dealt with more than one risk factor, or if no risk factor specified.
[2] Readership values rounded to nearest 1,000.

Table 3.11 shows the number of events supported as part of the heart health demonstration programs and their reach to consumers and intermediaries. Mass participation events were successful in reaching the greatest number of people – close to two million consumers. Events such as strategic planning initiatives, meetings with policy makers and training for service providers all served to support the development and dissemination of heart health knowledge, expertise and awareness among intermediaries and to support the capacity building goals of the Demonstration Phase.

Reflections from PIs...

"The Resource Centre functioned as a link between the external sources of heart health information and the community level. For example, the Resource Centre was key in supplying information from other exemplary heart health programs ... as well as specific interventions ... for use in communities. The Centre also kept a file on the most recent scientific consensus regarding the major risk factors."

One area in which the CHHI was less successful in building community capacity was in developing evaluation skills. For the most part, evaluation was handled centrally or contracted out, which did not allow local representatives opportunities for learning. In addition, local representatives were not as interested in developing evaluation skills as they were in other areas. These findings raise the issue of how appropriate and feasible is evaluation training among program providers.

Table 3.11 – Number of events and estimate of total number of people reached for various events, by target group, CHHI demonstration phase (1989-1995)

Product	Consumers[1]		Intermediaries[1]		Total	
	Number of events	Total people reached[2]	Number of events	Total people reached	Number of events	Total people reached[2]
Mass participation events	–	–	–	–	384	1,888,300
Presentations[3]	154	43,400	201	15,800	355	59,200
Classes	95	16,000	19	900	114	16,900
Training for service providers	–	–	–	–	152	10,000
Strategic planning events	–	–	–	–	118[4]	3,000[4]
Formal meetings with policy makers	0	–	94	2,400	94	2,400
Press conferences	55	5,100	2	24	57	5,100
Total	702		572		1,274	1,984,800[5]

[1] Includes some non-consumers as end users; [2] Number weighted to reflect the total number of people reached, numbers over 1,000 rounded to the nearest 100; [3] Excludes scientific presentations, posters and papers; [4] Substantial input from consumers participating in strategic events; [5] Numbers may not add due to rounding.

Projects provided leadership and other experience.

As Table 3.12 shows, the heart health projects also helped to strengthen the leadership role of the public health system. Dedicated heart health teams took the lead in nearly three-quarters of all demonstration projects, while government organizations (provincial, regional, municipal) working in the health sector took the lead in one-fifth (20%) of projects. Private sector partners were the least likely to play a leadership role. Resources were allocated along similar lines, with heart health program teams managing more than two-thirds (68%) of all project funding, and government agencies accounting for about one-fifth (23%) of total project resources.

Reflection from PIs...

"The Demonstration Phase has led to new skills among program developers, partners and participants: these new skills will assist communities in achieving their goals, heart-related or otherwise."

Table 3.12 – Number, percentage and total dollar value[1] of projects in the CHHI demonstration phase, by type of lead organization (1989-1995)

Lead organization	Number of projects (n =311)	% of total projects	Total dollar value[1,2] ($)	% of dollar value for all projects[3]
Dedicated heart health program	222	71	24,802,000	68
Government health agency – provincial/municipal/regional	63	20	8,174,000	23
Other/various/none	24	8	2,797,000	8
Private sector	2	1	619,000	2
Total	311	100	36,391,000[4]	100[4]

[1] Includes direct and indirect costs; [2] Calculation based on the proportional weighting of projects providing dollar information (n=118).
[3] Based on weighted total dollar value; [4] Numbers may not add up due to rounding.

Chapter Four LESSONS LEARNED

This chapter summarizes the lessons learned during the Demonstration Phase of the heart health projects. It includes highlights of submissions made by provincial heart health teams about issues affecting the overall success of the projects, including contextual factors, resources, organization and management, and technical support. Many of these factors contributed both positively and negatively to program outcomes, and depending on the circumstances, they served either as a barrier to be overcome or as an opportunity for development and learning. The findings reported here are intended to help guide future evaluation research in this area, and to stimulate thought, discussion and action as projects move into their Dissemination Phase.

Contextual influences

Several contextual factors were identified by respondents as having a positive impact on the overall success of heart health demonstration programs. Specifically, regional and provincial policy environments that encouraged health promotion and disease prevention approaches were seen as enhancing overall program performance. As well, the introduction of non-smoking legislation and the success of anti-smoking campaigns in a number of provinces were perceived as positive influences on the achievement of heart health goals.

"The adoption of a wellness focus at the provincial government level encouraged communities to examine their capacity and autonomy, as well as current and future health service needs. This created some community interest in, and action on, health issues."

In other cases, contextual factors acted as barriers to achieving heart health program goals. The most frequently mentioned barrier was health care downsizing and restructuring. In an environment of budget constraints, staff reductions and changing philosophies, many programs lost actual or potential resources, often from established partners, and had to contend with the feelings of resentment, apathy, skepticism and suspicion engendered by the changes. Where supportive policy environments existed, health care reform was much more likely to be viewed as a facilitator of program success than as a barrier, the reshuffling of health priorities and resources was seen as an opportunity to secure additional funding for heart health initiatives. Conversely, provinces in which heart health was not an existing priority faced significant challenges during the Demonstration Phase. It is noteworthy, however, that all provincial programs, regardless of their policy orientation, successfully completed the Demonstration Phase of the heart health program. The long-term impacts of health reform remain unknown.

"...health reform restructuring was detrimental to some community projects. Projects that were supported by structures, such as the Division of Public Health Nursing, floundered when these structures were dismantled. In some cases, no one in the reform system was assigned the responsibility of continuing to support specific health promotion initiatives started by the old system."

It was widely perceived that the ongoing economic decline in many areas was a significant barrier to program success. In addition to presenting direct health promotion challenges, declining economic conditions contributed to a perception that other community issues (e.g. unemployment, crime and depression) were of greater relative importance than heart health promotion. These competing priorities resulted in further reductions in the resources available for heart health initiatives.

"One single issue, such as heart health, is difficult to promote when there are so many other pressing needs."

Geographical isolation was also cited as one of the factors limiting program success. Physical distance from major centres and/or disconnectedness from major transportation and communication routes meant that ongoing program facilitation was difficult to provide. As a result, a number of initiatives proved to be impractical and/or extremely difficult to carry out. This theme is not surprising considering Canada's vast geographical area and the scattered distribution of the Canadian population.

Resources

Personnel, in-kind contributions and financing were identified as important considerations related to program resources. Specifically, the presence and use of volunteer personnel was seen as contributing significantly to program success, a perception that was reinforced by the substantial number of volunteers and volunteer hours documented by many projects. As one respondent noted, the initiative "demonstrated convincingly that people were the project's greatest assets."

"Project success is enhanced by the contributions of a volunteer force... In all project sites, volunteer, community and partner resources contributed to the implementation and enhancement of the project."

Notably, the expectations of the respondent's about the nature of volunteers' involvement in the programs were not met. There was a widely held perception that program effectiveness depended on volunteer personnel being committed to their projects, willing to spend considerable time and energy, and available to attend meetings regularly despite their often busy schedules. A volunteer's long-term commitment to projects was seen as essential to ensuring personnel, and therefore, project continuity. Conversely, a lack of continuity among staff was seen as having a negative impact on program effectiveness.

There was widespread acknowledgment of the need to use a volunteer's time and skills wisely, by establishing standards (e.g. job descriptions, policies for hiring and firing, skill development) and recruitment programs, matching volunteers with the skills required, and providing staff support. It was also considered important to recognize the contributions made by volunteers through praise, small rewards and acknowledgment in the wider community.

"The dramatic changes in organizational structure, personnel and change in focus and direction created a lack of clarity for the project ... Without a critical mass of project memory, the vision was not carried forward within the new structure. The original project site subsequently terminated after the second year."

The contribution of in-kind resources made by a variety of organizations and community partners was regarded as key to the success of many projects. In some cases, these contributions were seen to play an even greater role than did purely financial contributions. Where access to in-kind resources was limited, projects and programs were seen as less successful.

"There has been no evidence that lack of additional funding had in any way limited the commitment to/or involvement in heart health. They have found however, that without in-kind support from schools, local organizations, and the health organization, the project could not have operated."

There was a widely held perception that access to financial resources could have been improved. Although it was generally accepted that program funding was limited, factors such as the timing of funding, particularly the restriction of funding to short-term contracts, limited the achievements of some programs.

As well, the conditions placed on funding and the administrative difficulties associated with accessing funding tended to "bog down" some programs. It was suggested that funds be contracted across the full time span of the project, with continued funding tied to deliverables and based on meeting a set of pre-established standards. National-level expectations (e.g., for evaluation, fiscal reporting) should also be made clear at the outset of the program by establishing written standards and criteria. This would help to avoid "bureaucratic wranglings" and loss of credibility in the community.

Organization and management

A number of factors related to organization and management were identified as playing a key role in determining the success of heart health programs. Specifically, the degree to which communities took ownership of a project was seen to be an extremely important facilitator of the success and long-term sustainability of a project. Developing a sense of ownership was viewed as contingent on several factors related to the nature of the program's interactions with the community, in particular, the extent of community involvement and participation in decision-making. Moreover, there was a perception that projects were more likely to be successful if they "hooked into" identified community needs and addressed existing agendas for action. For this reason, time and effort were well spent on efforts to "get to know" the community's culture and priorities.

"... strong community involvement enhanced ownership of the project and provided the stability necessary for the project to flourish in a changing environment ..."

Ongoing facilitation of individual projects was also seen to be an important facilitator of program success and critical to "sustaining momentum." Respondents did not view project facilitation as project control, but rather that a supportive role for management was observed to provide the best results. This supports the previously mentioned findings about community ownership. Project participants need to feel that projects are their own and that they have a measure of decision-making power in them. However, without the assistance/facilitation of experienced managers, participants may feel overwhelmed and unable to realize the project's full potential.

"There must be someone responsible for overall coordination. Getting to know community leaders and facilitating integration of the project into community life is critical."

The balance of ownership and facilitation was a difficult one to maintain, especially since an "inability to take a 'facilitative leadership' role would result in the committees feeling 'betrayed' by the system." Despite the difficulties associated with this approach, there was general agreement that "there is great potential for active community participation in health issues, using the community committee with facilitator's model."

"Experience from the sites has shown that yearly strategic planning is necessary. Where communities were part of the design in planning, interventions were better promoted and had increased participation. A plan was important in developing buy-in by community members. The planning process helped to assess and reflect current needs, issues and political climate."

Also identified as key facilitators of program success were the presence of "clear goals, direction and purpose developed and adopted by the committee," and clearly defined roles and expectations for project personnel. According to respondents, a lack of clear goals can lead to muddled decision-making and may reduce program credibility due to the transmission of inconsistent messages to the community. Establishing clear roles was identified as a means of reducing tension among personnel and increasing personnel accountability and commitment.

"Members suggested that role clarification is essential early in the formation of a committee, because it leads to common expectations and thereby decreases potential for conflict."

Respondents felt that it was important to have strong leaders for both programs and individual projects. The best leaders were charismatic, high profile people, who were respected in the health sector and in the community. Often seen as "champions for the cause" of heart health, they helped to develop the right climate for networking, advocacy, and community building. Programs and projects that were able to attract people with these "credentials," particularly at the outset, were better positioned for long-term sustainability.

"Strong leadership from the health sector was necessary in each community to rally others, especially senior officers in health agencies. The ability to demonstrate credibility, profile and "clout" was needed. Charismatic, high-profile leaders were especially important at the beginning to attract others."

According to respondents, establishing partnerships with community groups helped them to better understand the culture and dynamics of individual communities. This proved particularly beneficial in rural communities where collaboration with established groups (e.g., Agricultural Society) contributed to the overall success of projects.

"This experience underscored the advantages of partnering with well established 'lead' agencies capable of mobilizing the resources and expertise necessary to deliver program components with relatively little professional/technical support from the core heart health program team."

One of the barriers to success identified by respondents was the difficulty resolving differences about what level of action the programs should take. In some cases, too much time was spent developing concepts and not enough time taking concrete action to improve heart health. Moreover, in some cases the coordinating committee was not viewed as "an efficient mechanism for decision-making", which limited its ability to deal with these and other issues.

Relationship problems between individuals, organizations, and coalitions sometimes hindered program development. For example, competitiveness among organizations was seen as a major barrier to achieving project potential since it led to power struggles, turf wars, mixed views on the contributions of different organizations and concerns about organizational autonomy. These findings highlight the need for sensitivity in working with established organizations, and the importance of continually clarifying organizational roles in order to build cooperation, address problems and identify mutual benefits.

"Group dynamics were at times difficult and the group lacked a common framework and orientation to health promotion. Many members on the council were more interested in carrying out tasks and were frustrated with the conceptual nature of the council's work."

Interpersonal tensions were also cited as barriers to realizing program potential. Communication difficulties and personality clashes among management and field personnel limited cooperation and teamwork.

Evaluation

The use of participatory evaluation strategies was generally accepted to be an important tool for increasing community acceptance of the evaluation process. Moreover, there was a perception that involving the community in the development process resulted in better evaluation tools and ultimately in better information. At the same time, community participants had the opportunity to increase their own skills – for example, in data verification, piloting instruments and data collection techniques.

Notably, however, participatory evaluation sometimes interfered with the goal of between-site comparison, and with the ability of the research to be transferred to other forums. Also, because common evaluation components were not designated prior to project initiation, some important data were not collected at the project's inception.

"The down side of the participatory process is that by not designating common evaluation components prior to project initiation (as occurs in traditional research paradigms) some important data is not collected at the inception of the project."

Providing immediate feedback of easily understandable evaluation results was considered to be an essential component of successful evaluation. Immediate feedback, especially in the early part of the project, encouraged volunteers and staff to see the practical relevance of the data and to use the results in project planning.

"There needed to be constant reminders about the ideal evaluation strategy versus the reality based on time and resources."

Other components of successful evaluation were identified, including the setting of realistic evaluation objectives that meet the needs of major stakeholders; building evaluation into the planning process; using independent evaluation teams and balanced evaluation criteria; including some "process", as well as "outcome" indicators; clearly defining the evaluator's role; and providing continuous, well-resourced evaluation. Moreover, there was general agreement that the monitoring and evaluation capabilities of each community should be assessed at the outset of the program and the necessary support and resources provided for skill development.

Participants also identified several aspects of evaluation that served as barriers to program success. There was a perception that evaluation criteria, frameworks and results were not available when they were needed, or if they were, they changed midstream. Problems were also identified in processes for distributing evaluation results. For example, there was no systematic measurement of time and contributions given by individuals and organizations; information that could ultimately be used to strengthen the argument for the value of the approaches used by the heart health program.

"While most evaluations were managed in terms of data collection and analysis, getting the results out to partnering organizations in a timely manner was undoubtedly the weakest aspect of our evaluation effort."

There was also a perception that the criteria intended to evaluate programs were unrealistic and/or inappropriate. This sometimes resulted in evaluation guidelines not being used to their full potential.

Finally, it was noted that the lack of specific funding for evaluation caused tension and hindered effective completion. There was some tension between the need to develop and deliver program activities and the requirement that these activities be thoroughly evaluated. This brought about a "robbing Peter to pay Paul" scenario.

Technical support

Feedback about technical support was dominated by discussions about training, which was considered essential to enhancing the abilities of staff and volunteers to carry out their designated roles and responsibilities.

"One of the key lessons is that training should be provided to enhance the abilities of staff and volunteers to carry out designated roles and responsibilities."

Training of health professionals, staff and volunteers was offered in a wide variety of forms in different communities. This enabled projects to operate more efficiently, and contributed to the development of skills and abilities which will remain long after this initiative. A range of skills was required, for example, central management staff benefited from skills in conflict resolution, group management, team building and effective communication techniques. Community coordinators required basic training in such areas as project management and budgeting.

Skill development through training, and the creation of partnerships with well-established community organizations, who had skills to offer, were influential factors in promoting personnel competence and, ultimately, in the success of projects. Sometimes, this training took the form of external experts, brought in to assist with the development of a specific skill. Other training techniques included "peer learning" techniques and the provision of educational materials, such as training manuals and videos.

Respondents commented on the need for technical support to be flexible, and underscored that one of the primary goals of skill development is that it should benefit the community over the long run, rather than just "fix" the problem. This supports the program's goals related to capacity building; that is, projects were designed to demonstrate effective ways of establishing the program infrastructure required at multiple levels to support the ongoing development and maintenance of community heart health initiatives.

Chapter Five CONCLUSIONS AND FUTURE DIRECTIONS

The CHHI set out to make CVD prevention a public health issue, an issue to be dealt with using a community based, population health approach, rather than a clinical approach alone. To achieve this, federal-provincial collaboration was initiated that engaged the public health system in the development of a national heart health database and implementation of demonstration programs in all the provinces. The process evaluation shows that these objectives were achieved. A key ingredient of success in mobilizing the health system to address CVD prevention was to have the federal commitment to provide matching funds to the provinces for the provincial heart health programs and core technical and policy support, by Health Canada, to the Initiative as a whole. The process evaluation of the Demonstration Phase – the topic of this report – demonstrates substantial program and research activity in all provinces that contributes directly to the goals of the CHHI.

The process evaluation reveals the following main contributions and insights from the Demonstration Phase:

The CHHI Demonstration Phase created partnerships within and across levels of government as well as public, private and voluntary sectors.
Partnerships and intersectoral collaboration are cornerstones of a public health approach to heart health promotion (The Victoria Declaration on Heart Health, 1992; The Catalonia Declaration, 1996; The Singapore Declaration, 1999; The Osaka Declaration, 2001). The Demonstration Phase was instrumental in establishing partnerships and learning how to maximize their effectiveness. Though it is too early to understand the long-term impacts of partnerships, the Demonstration Phase established a collaborative infrastructure for heart health promotion across Canada. The collaborative infrastructure includes:

- Strategic alliances at the international level (e.g. with the World Health Organization (WHO), and countries that are members of WHO initiatives concerned with cardiovascular and noncommunicable disease prevention);
- National level partnerships: Notable among these are the partnerships between national health professional organizations, the Heart and Stroke Foundation of Canada, and Health Canada. These partnerships illustrate an attempt to strengthen the links between government and NGOs, which is essential for effective heart health policy implementation (The Singapore Declaration, 1999);
- Provincial level partnerships: Most provincial programs were spearheaded by a provincial coalition, which brought together numerous organizations from the health professional, academic and private sectors. The in-kind contributions reported from these various sectors illustrate substantial mobilization of traditional and non-traditional partners to promote heart health;
- National/provincial linkages: An innovative aspect of the CHHI model is the linkage between the federal government and the provincial departments of health. Results from the Demonstration Phase illustrate the products of a co-funding arrangement combined with the core technical and policy support provided by Health Canada;
- Provincial/local linkages: The national/provincial linkages were mirrored at the provincial and local levels. The Demonstration Phase successfully mobilized many organizations from health and non-health sectors to implement heart health programs at provincial and community levels. The primary roles of provincial organizations were to provide policy and technical support, whereas implementation was the (though not exclusive) role of organizations at the local level.

These partnerships and linkages provide a preliminary framework for strategic alliances needed for heart health promotion and other similar initiatives. The findings provide new knowledge about implementing a national health policy using an intersectoral approach to mobilize the health system and generate action at multiple levels.

The Demonstration Phase enhanced capacity at national, provincial and community levels.

A major lesson from the pioneering research and demonstration programs for CVD prevention was the need to integrate (heart) health promotion in the public health system to achieve sustainability (Mittelmark et al., 1993). As a result, this became a defining feature of the CHHI. A main product of the CHHI Demonstration Phase was identifying various dimensions of capacity (e.g. skills for comprehensive program planning, participatory research) needed to successfully implement heart health promotion activities, and strengthening some of these dimensions. For example, national and provincial capacity to provide policy and technical support was enhanced as well as capacity among health service providers at local and provincial levels to support heart health program implementation.

The findings on capacity building from the Demonstration Phase helped focus the next phase, the CHHI Dissemination Phase, on capacity building. This emphasis on capacity building is consistent with the literature that suggests the need for new knowledge on the various dimensions of capacity (Hawe et al., 1997; Goodman et al., 1998); ways to measure capacity, especially at the organizational level (Steckler et al., 1997); and ways to build capacity (Schwartz et al., 1993; Jackson et al., 1994).

The Demonstration Phase developed and tested population-based programs for heart health promotion suitable for Canada.

Population-based strategies for disease prevention and health promotion represent a new approach (Rose, 1992; Pederson et al., 1994). A priority therefore, is to identify effective implementation strategies. It is increasingly recognized that population-based health promotion strategies need to be selected and adapted to suit the context in which they are implemented (Green et al., 1996). The CHHI Demonstration Phase represents a first step in developing population-based heart health programs suitable to diverse locations and health system delivery structures within Canada. This pool of programs becomes the raw material for identifying best practices for a population health approach to CVD prevention (Cameron et al., 1998).

The Demonstration Phase established a platform for implementation research.

The primary focus of research on community-based CVD prevention programs has been on behavioural and risk factor outcomes (Ebrahim and Smith, 1997; Sellers et al., 1997). Absent from this focus is the process of implementation, which has been recognized increasingly as a critical element of success (Mittelmark et al., 1993; Johnson et al., 1996). The CHHI Demonstration Phase, recognizing this gap in understanding, placed primary emphasis on the process of implementation. There were many lessons learned about the implementation process. These lessons are described in detail in Chapter Four. A product of these lessons is a preliminary set of critical success factors for implementation of provincial and community-based heart health programs listed in Box 5.1. These factors provide support for social ecological approaches to health promotion (Green et al., 1996) as they demonstrate the strong influence of contextual factors, as well as factors operating at multiple levels (e.g., individual, organizational, community, broader environment).

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Box 5.1 – Factors for success

Respondents identified the following factors as contributing to the success of heart health initiatives:

- Community "ownership" of projects
- Clearly defined goals, direction and roles
- Well-planned participatory evaluation process
- Flexible training programs and technical support designed to benefit the community over the longer term
- A supportive policy environment
- Health economic conditions
- Geographical accessibility
- Wise use of volunteer services
- Contribution of in-kind resources
- Access to long-term funding
- Written standards and criteria for funding

The Demonstration Phase identified clear directions for research and policy to further enhance heart health promotion across Canada and elsewhere.

A key lesson from the CHHI Demonstration Phase is the long, flexible time frame needed for nation-wide implementation of a public health approach to CVD prevention. Results from the Demonstration Phase suggest priority be given to the following directions:

a) *Continue to build capacity:* While the Demonstration Phase illustrates substantial mobilization, the "preventive dose" has not been achieved. More people, more organizations, and more communities need to be reached.

b) *Explore ways to more fully integrate heart health promotion into the existing system of health:* At the end of the reference period, the public health system was not fully mobilized as a platform for delivery of heart health. While many lessons were learned about the important role of contextual factors, the goal of the CHHI to integrate heart health promotion into the public health system had limited success, due in part to health system reform that occurred in most provinces throughout the Demonstration Phase.

c) *Build on the implementation research agenda:* The CHHI Demonstration Phase defined new agendas for CVD research and increased emphasis on studying the process of implementing effective chronic disease prevention strategies on a national scale. This should increase our understanding of meaningful short-term outcomes (e.g. capacity, program implementation), which will contribute to longer-term population health impacts. The CHHI Demonstration Phase began to address this gap in research and stimulate the research and program agenda for the subsequent Dissemination Phase.

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REFERENCES

Cameron R, Walker R, and Jolin MA. International best practices in heart health. Toronto, ON: Heart Health Resource Centre/Ontario Public Health Association, 1998.

Carleton RA, Lasater TM, Assaf AR, et al. The Pawtucket Heart Health Program: Community changes in cardiovascular risk factors and projected disease risk. American Journal of Public Health 1995; 85(6): 777-785.

Ebrahim S, and Smith GD. Systematic review of randomised controlled trials of multiple risk factor interventions for preventing coronary heart disease. British Medical Journal 1997; 314(7095): 1666-1674.

Elliott S et al. Assessing public health capacity to support community based heart health promotion: The Canadian Heart Health Initiative Ontario Project (CHIOP). Health Education Research 1998; 13:607-622.

Fortmann SP, and Varady AN. Effects of a community-wise health education program on cardiovascular disease morbidity and mortality. American Journal of Epidemiology 2000; 152: 316-323

Goodman RM, Speers MA, McLeroy K, et al. Identifying and defining the dimensions of community capacity to provide a basis for measurement. Health Education and Behavior 1998; 25(3): 258-278.

Green LW, Richard L, and Potvin L. Ecological foundations of health promotion. American Journal of Health Promotion 1996; 10(4): 270-281.

Hawe P, Noort M, King L, et al. Multiplying health gains: The critical role of capacity building within health promotion programs. Health Policy 1997; 39: 29-42.

Heart and Stroke Foundation of Canada. Heart disease and stroke in Canada. Ottawa, Canada, 1997.

Heart and Stroke Foundation of Canada. The Changing face of heart disease and stroke in Ottawa, Canada, 1999.

Jackson C, Fortmann SP, Flora JA, et al. The capacity building approach to intervention maintenance implemented by the Stanford Five-City Project. Health Education Research 1994; 9(3): 385-396.

Johnson JL, Green LW, Frankish CJ, et al. A dissemination research agenda to strengthen health promotion and disease prevention. Canadian Journal of Public Health 1996; 87(2): S5-S10.

Luepker RV, Murray DM, Jacobs DR, et al. Community education for cardiovascular disease prevention: risk factor changes in the Minnesota Heart Health Program. American Journal of Public Health 1994; 84: 1383-1393.

Mittelmark MB, Hunt MK, Heath GW, et al. Realistic outcomes: lessons from community-based research and demonstration programs for the prevention of cardiovascular disease. Journal of Public Health Policy 1993; 14(4): 437-462.

Orlandi M. Health promotion technology transfer: organizational perspectives. Canadian Journal of Public Health 1996; 87:S28-S33.

Pederson A, O'Neill M, Rootman I. Health promotion in Canada: provincial, national and international perspectives. Toronto: W.B. Saunders, 1994.

Promoting Heart Health in Canada: Report of the working group on the prevention and control of cardiovascular disease submitted to the Federal-Provincial advisory committee on community health. Ottawa, Canada June, 1987.

Puska P, Nissinen A, and Tuomilehto J. The community-based strategy to prevent coronary heart disease: conclusions from the ten years of the North Karelia Project. Annual Review of Public Health 1985; 6: 147-193.

Rose G. The strategy of preventive medicine. New York: Oxford University Press, Inc., 1992.

Schwartz R, Smith C, Speers MA, et al. Capacity building and resource needs of state health agencies to implement community-based cardiovascular disease programs. Journal of Public Health Policy 1993; 14(4): 480-494.

Sellers DE, Crawford SL, Bullock K, et al. Understanding the variability in the effectiveness of community heart health programs: A meta-analysis. Social Science and Medicine 1997; 44(9): 1325-1339.

Stachenko S. Evaluation guidelines for heart health. Health Canada, Ottawa, Canada 1991.

Steckler A, Goodman RM, and Alciati MH. Collecting and analysing organizational level data for health behavior research (Editorial). Health Education Research 1997; 12(3): i-iii.

Taylor SM et al. Heart health promotion: predisposition, capacity and implementation in Ontario public health units, 1994-96. Canadian Journal of Public Health 1998; 89:406-409.

The Catalonia Declaration – Investing in heart health. Declaration of the Advisory Board of the Second International Heart Health Conference, Barcelona, Catalonia (Spain), June 1, 1995. Autonomous Government of Catalonia Department of Health and Social Security, 1996.

The Osaka Declaration – Health, economics and political action: stemming the global tide of cardiovascular disease. Declaration of the Advisory Board of the Fourth International Heart Health Conference, Osaka, Japan, May 2001.

The Singapore Declaration – Forging the will for heart health in the next millennium. Declaration of the Advisory Board of the Third International Heart Health Conference, Singapore, September, 1998. Singapore National Heart Association, 1999.

The 2000 Victoria Declaration – Women, heart diseases and stroke, science and policy in action. Declaration of the Advisory Board of the First International Conference on Women, Heart Disease and Stroke, Victoria May, 2000. Health Canada, Ottawa, Canada.

The Victoria Declaration on Heart Health - Bridging the gap: science and policy in action. Declaration of the Advisory Board of the First International Heart Health Conference. Victoria, Canada May, 1992. Health and Welfare Canada, Ottawa, Canada 1993.

World Health Organization, Regional Office for Europe. Positioning CINDI to meet the challenges. Copenhagen, Denmark 1992.

APPENDIX LIST OF PUBLICATIONS, REPORTS, THESES, DISSERTATIONS AND PRESENTATIONS

PUBLICATIONS

Angel, A., Reeder, B.A., Chen, Y., Senthilselvan, A., Depres, J.P., Leiter, L., and Rabkin, S. (1994). Clustering of cardiovascular disease risk factors with abdominal obesity in Canada. (abstract). International Journal of Obesity. 18(Suppl 2):100.

Balram, C., Connelly, P., Gelskey, D.E., Hogan, K. et al. (1992). Canadian heart health surveys: A profile of cardiovascular risk. Canadian Medical Association Journal. June (Suppl):1-56.

Barnett, T., O'Loughlin, J., Paradis, G., and Renaud, L. (1997). Reliability of proxy reports of parental smoking by elementary school children. Annals Epidemiology. 7:396-399.

Bernatchez, R.(1995). Un coeur en santé! La Presse. 2 avril 1995: C1-C3.

Brown, M.G., Langille, D.B., and MacLean, D.R. (1992). High-risk of multifactorial public health strategies to reduce CVD. The Canadian Journal of Cardiology. May, 9 (Suppl D).

Brunt, H., Reeder, B.A., Stephenson, P., Love, E., and Chen, Y. (1995). The Hutterite and rural Saskatchewan heart health surveys: A comparison of physical and laboratory measures. In: McDuffie, H., Dosman, J., Semchuk, K., Olenchock, S., and Senthilselvan, S. (eds.): Agricultural Health and Safety: Workplace, Environment, Sustainability. CRC Press Inc., Lewis Publishers, Boca Raton, Florida, 1995;Chapter 6.1:513-20.

Brunt, H., Reeder, B.A., Stephenson, P., Love, E., and Chen, Y. (1994). The Hutterite and rural Saskatchewan heart health surveys: A comparison of physical and laboratory measures. Canadian Journal of Public Health. 85(5):299-302.

Burn, G.E., Naylor, P.J., Green, L.W., Frankish, J., MacLeod-Williams, H., and O'Connor, B. (in press). Assessment of a worksite-based lifestyle screening programme with reference to motivation to change behavior. American Journal of Health Promotion.

Cameron, R., Jolin, M.A., Walker, R., McDermott, N., Gough, M. (in press). Linking science and practice: Towards a system for enabling communities to adopt best practices for chronic disease prevention. Health Promotion Practice.

Cameron, R., Walker, R., Gough, M., McDonald, P. (in press). Linking public health science and practice: an example from the Canadian Heart Health Initiative. Leadership in Health Services.

Cameron, R., Walker, R., Jolin, M.A. (1998). Public policy project. Newfoundland and Labrador heart health project. International Best Practices in Heart Health. Heart Health Resource Centre, Ontario. pp78-83.

Cameron, R., Brown, K.S., and Best, J.A. (1996). The dissemination of chronic disease prevention programs: Linking science and practice. Canadian Journal of Public Health. 87(S2):S50-S53.

Cameron, R., Walker, R., Elliott, S.J., and Taylor, S.M. (1996). Update on the Canadian Heart Health Initiative Ontario Project (CHHIOP). Public Health and Epidemiology Report Ontario. 7(1):10-12.

The Canadian Heart Health Survey's Research Group (Reeder, B.A., co-author). (1992). The Federal-Provincial Canadian Heart Health Initiative. Editorial. Canadian Medical Association Journal. 146(11):1915-1916.

Chen, Y., Reeder, B.A., Joffres, M., Young, T.K., MacDonald, S., and Gelskey, D. (1995). Cardiovascular risk factors in rural and urban residents of the Canadian Prairies. In: McDuffie, H., Dosman, J., Semchuk, K., Olenchock, S., and Senthilselvan, S. (eds.): Agricultural Health and Safety: Workplace, Environment, Sustainability. CRC Press Inc., Lewis Publishers, Boca Raton, Florida, 1995;Chapter 6.2:521-524.

Chen, Y., Rennie, D.C., and Reeder, B.A. (1995). Age-related association between body mass index and blood pressure: The Humboldt Study. International Journal of Obesity. 19:825-835.

Chen, Y., Rennie, D., and Reeder, B.A. (1994). Stronger relationship between body mass index and blood pressure in children and young adults than older persons: The Humboldt Study. International Journal of Obesity. 18(Suppl 2):139.

Chevalier, S., Dedobbeleer, N., and Tremblay, M. (1995). Identification des leaders d'une communauté. Revue Canadienne de Santé Publique. 86(2):137-140.

Chockalingam, A., Reeder, B., MacLean, D.R., et al. (1997). Prevalence of elevated serum cholesterol (LDL-C) and triglycerides (TG): The Canadian heart health data. The Canadian Journal of Cardiology. June. 13 (Suppl B):215B.

Choinière, R., Lafontaine P., Edwards A.C. (2000). Distribution of cardiovascular risk factors by socioeconomic status among Canadian adults. Canadian Medical Association Journal. 162 (9 Suppl): S5-S11.

Cogdon, A. (1997). The heart health partnership project: Discovering new ways to enhance health in the Western Region. Health Promotion Atlantic Newsletter. September. 3:3.

Cogdon, A. (1996). Partnerships: Creating a win-win situation. Health Promotion Atlantic Newsletter. Summer Special Edition.

Colin, C.(1996). L'expérience du Québec en promotion de la santé. La Santé de l'Homme. 1996:23-27.

Connelly, P.W., MacLean, D.R., Horlick, L., O'Connor, B., Petrasovits, A., and Little, J.A. (1992). Plasma lipids and lipoproteins and the prevalence of risk of coronary heart disease in Canadian adults. Canadian Medical Association Journal. 146 (11 Suppl):1977-1987.

Damestoy, N., Renaud, L., Lampron, G., Kishchuk, N., Sylvestre, M., O'Loughlin, J., and Perreault, R. (1994). L'interdiction de la vente de tabac aux mineurs: Une concertation est nécessaire. Revue Canadienne de Santé Publique. 85:85-88.

Davidson, K., MacGregor, M.W., MacLean, D.R., McDermott, N., and Farquharson, J. (1996). Coder gender and potential for hostility ratings. Health Psychology. 15(4):298-302.

Donovan, C. (1997). The Newfoundland and Labrador heart health program. Worldwide efforts to improve heart health. Centers for Disease Control and Prevention. Stanford, California. 28.

Eastwood, J.A., Gregor, R.D., MacLean, D.R., and Wolf, H.K. (1996). Effects of recruitment strategy on response rates and risk factor profile in two cardiovascular surveys. International Journal of Epidemiology. 25(4):763-769.

Ebbesen, L.S., Ramsden, V.R., Reeder, B.A., and Hamilton, T., -Beechy Program Team. (1997). Heart health in rural Saskatchewan. The Canadian Nurse. 93(2):27-30.

Ebbesen, L.S., Ding, Y., Reeder, B.A., and Haennel, R.G. (1994). The relationship between physical activity and major CVD risk factors in a Canadian prairie population. Medicine and Science in Sports and Exercise. 26(5):S60.

Ebbesen, L.S., Reeder, B.A., Knox, L.J., Neilson, S.D., Mansour, A., Steer S.L., and Rutherford, L. Community-based stroke and CVD prevention in Saskatchewan. Health Reports (Supplement) – Conference Proceedings of the International Conference on Stroke Prevention and Epidemiology (January 1994).

Elliott, S.J., Jolin, M.A., Walker, R. (2000). Partnering in and for heart health promotion: Findings from a survey of community organizations. Canadian Journal of Public Health. 91(3):229-233.

Elliott, S.J., Taylor, S.M., Wilson, K., Robinson, K., Riley, B., and Walker, R. (2000). Restructuring public health in Ontario: Implications for heart health. Canadian Journal of Public Health. 91(2):94-97.

Elliott, S.J., Taylor, S.M., Cameron, R., and Schabas, R. (1998). Assessing public health capacity to support community-based heart health promotion: The Canadian Heart Health Initiative, Ontario Project (CHHIOP). Health Education Research. 13(4): 607-18.

Elliott, S.J., Taylor, S.M., Cameron, R., and Schabas, R. (1996). The meaning and priority of heart health promotion – A Canadian Heart Health Initiative - Ontario Project (CHHIOP) update. Public Health and Epidemiology Report Ontario. 7(5):295-297.

Farquharson, J., MacLean, D., Heath, S., McDermott, N. (1997). Worksite heart health: Process and results of a pilot program. The Canadian Journal of Cardiology. June. 13 (Suppl B):78B.

Fisher, L., Soubhi, H., Mansi, O., Paradis, G., Gauvin, L., and Potvin, L. (1998). Family process in health research: Extending a family typology to a new cultural context. Health Psychology. 17(4):358-366.

Gelskey, D.E., Fox, J.G., and Hammond, G.W. (1989). Determining lipid risk factors for coronary heart disease [letter; comment]. Canadian Medical Association Journal. 149(5):493.

Gelskey, D.E., Young, T.K., and Macdonald, S.M. (1994). Screening with total cholesterol: Determining sensitivity and specificity of the National Cholesterol Education Program's Guidelines from a population survey. Journal of Clinical Epidemiology. 47(5):547-553.

Gray-Donald, K., O'Loughlin, J., Richard, L., and Paradis, G. (1997). Validation of a short telephone-administered questionnaire to evaluate dietary interventions in low-income communities. Journal of Epidemiology and Community Health. 51:326-331.

Green, K., Cameron, R., Polivy, J., Cooper, K., Liu, L., Leiter, L., and Heatherton, T., -The Canadian Heart Health Surveys Research Group. (1997). Weight dissatisfaction and weight loss attempts among Canadian adults. Canadian Medical Association Journal. 157(1 Suppl):S17-25.

Heath, S., Dickinson, M., Cogdon, A., Hood, R., Farquharson, J., Salley, L., and MacLean, D. (1998). Organizational capacity for heart health promotion: Heart Health Nova Scotia. In Susan J. Elliott (Editor). Qualitative Analysis in Process Evaluation for Heart Health Promotion. Proceedings of a Workshop. Montreal, Quebec, February 25-27, 1998.

Heath, S., Farquharson, J., MacLean, D., et al. (1997). Evaluation of a women's centre smoking cessation program. The Canadian Journal of Cardiology. June, 13 (Suppl B):58B.

Herbert, R. and White, R.E. (1995). Healthy hearts at work: Prince Edward Island Heart Health Program worksite pilot project. Canadian Journal of Cardiovascular Nursing. 7(2):12-18.

Hood, R., Farquharson, J., Heath, S., Cogdon, A., and MacLean, D.R. (1997). Heart health dissemination and its research in Nova Scotia. The Canadian Journal of Cardiology. June, 13 (Suppl B):132B.

Joffres, M. (1993). The Alberta Heart Health Survey: Methods and results. Canadian Journal of Cardiology. 9(4):330-308.

Joffres, M. (1992). Heart Health into the future: Positioning to meet the challenges. Health Promotion. Spring, 30(4).

Joffres, M., Hamet, P., Rabkin, S.W., Gelskey, D.E., Hogan, K., and Fodor, G. (1992). Prevalence, control and awareness of high blood pressure among Canadian adults: Canadian Heart Health Surveys Research Group. Canadian Medical Association Journal. 146(11):1997-2005.

Johnson, J.L., Green, L.W., Frankish, C.J., MacLean, D.R., and Stachenko, S. (1996). A dissemination research agenda to strengthen health promotion and disease prevention. The Canadian Journal of Public Health. 87 (Suppl 2):S5-S10.

Johnson-Down, L., O'Loughlin, J., Koski, K., Gray-Donald, K. (1997). High prevalence of obesity in low income and multiethnic schoolchildren: a diet and physical activity assessment. J. Nutr. 127: 2310-5.

Le projet St-Louis du Parc a été décrit comme projet utilisant l'approche globale a la santé en milieu scolaire. Special insert to the CPHA Health Digest. Winter 1993/94:17(4).

Ledoux, M., Lambert, J., Despres, J.P., and Reeder, B.A., The Canadian Heart Health Surveys Research Group. (1997). Correlation between cardiovascular risk factors and simple anthropometric measures. Canadian Medical Association Journal. 157(1 Suppl):S46-S53.

Ledoux, M., Lambert, J., Reeder, B.A., Despres, J.P., The Canadian Heart Health Surveys Research Group. (1997). A comparative analysis of weight to height and waist to hip circumference indices as indictors of the presence of cardiovascular disease risk factors. Canadian Medical Association Journal. 157(1Suppl):S32-S38.

Ledoux, M., Lambert, J., Depres, J.P., Reeder, B.A., Angel, A., and Chen, Y. (1994). Measurement of obesity as predictor of cardiovascular disease (CVD) risk factors (abstract). International Journal of Obesity. 18(Suppl 2):100.

Lessard, R., Lachance, B., Paradis, G., Potvin, L., Renaud, L., O'Loughlin, J., Pelletier, J., and Cameron, S. (1996). La santé du coeur, les habitudes de vie. Actualite Medicale 1996, mai, 2(1 Suppl):1-15.

Liu, L., Shuaib, A., and Reeder, B.A. (1991). Risk factors for ischemic stroke: Saskatchewan Heart Health Survey. Annual Meeting of the Canadian Congress of Neurological Sciences, Halifax, June 19-22. (abstract) Canadian Journal of Neurological Sciences.

Lowe-Wickens, W., and Maloff, B. (1997). CSHHP update (testimonials). Calgary Catholic School District "Reflections" bulletin, June, 1997.

Lowe-Wickens, W., and Maloff, B. (1997). CSHHP physical activity interventions. Calgary Catholic School District "Reflections" bulletin. January, 1997.

Lowe-Wickens, W., and Maloff, B. (1996). CSHHP overview/update. Calgary Regional Health Authority Bulletin. September, 1996.

Lowe-Wickens, W., and Maloff, B. (1996). CSHHP updates. Calgary Catholic School District "Reflections" bulletin. June 1996.

Lowe-Wickens, W., and Maloff, B. (1996). CSHHP updates. Calgary Catholic School District "Reflections" bulletin. April 1996.

Lowe-Wickens, W., and Maloff, B. (1995). Interventions. Calgary Catholic School District "Reflections" bulletin. December, 1995.

Lowe-Wickens, W., and Maloff, B. (1994). CSHHP overview. "Schools come alive" newsletter (Health and Physical Education Council-Alberta Teachers Association). September 1994.

Lowe-Wickens, W., and Maloff, B. (1994). AHHP in a community near you. In: Alberta Heart Health Project Bulletin. June 1994.

Lowe-Wickens, W., and Maloff, B. (1994). CSHHP report to the Calgary Catholic Board of Education. May 1994.

Lowe-Wickens, W., and Maloff, B. (1993). CSHHP report to the Calgary Board of Health. December, 1993.

Lowe-Wickens, W., and Maloff, B. (n.d). CSHHP articles in intervention school newsletters, up to monthly in 2 schools over 4 years.

Lowe-Wickens, W., and Maloff, B. (n.d). CSHHP in the Alberta Heart Health Project "Heartlines", 6 articles over 4 years.

Lowe-Wickens, W., and Maloff, B. (n.d.). CSHHP updates in the Alberta Heart Health Project "Backgrounder" Package. (annually).

Macdonald, S., Reeder, B.A., Chen, Y., and Despres, J.P., The Canadian Heart Health Surveys Research Group. (1997). Obesity in Canada – a descriptive analysis. Canadian Medical Association Journal. 157(1 Suppl):S3-S9.

Macdonald, S.M., Reeder, B.A., Chen, Y., and Depres, J.P., Canadian Heart Health Surveys Research Group. (1994). Obesity in Canada – a descriptive analysis of the Canadian Heart Health Survey (abstract). International Journal of Obesity. 18(Suppl 2):99.

MacDonald, S., Joffres, M.R., Stachenko, S., Horlick, L., Fodor, G. (1992). Multiple cardiovascular disease risk factors in Canadian adults. Canadian Heart Health Surveys Research Group. Canadian Medical Association Journal. 146(11):2021-9.

MacLean, D., Cogdon, A., Farquharson, J., Hood, R., Travers, K., and Petrasovits, A. (1997). Food for health: A nutritional initiative of the Nova Scotia Heart Health Program. In Implementing Dietary Guidelines for Healthy Eating. Verner Wheelock (Ed). London: Chapman and Hall.

MacLean, D.R., and Tan, M.H. (1997). Macrovascular disease. In Surveying and Preventing the Complications of Diabetes in Nova Scotia. Diabetes Care Program of Nova Scotia.

MacLean, D., Farquharson, J., Hood, R., Cogdon, A., and Kephart, G. (1997). What a difference a decade makes: Estimating change in CVD risk in the Nova Scotia Population. The Canadian Journal of Cardiology. 13 (Suppl B):248B.

MacLean, D.R., and Glasunov, I., (Eds.): (1995). Cardiovascular disease prevention and control in diabetes. The WHO CINDI Programme Guidelines for Intervention. WHO Regional Office for Europe. Copenhagen. 1995. EUR/ICP/CIND 94 03/PB01.

MacLean, D.R., Petrasovits, A., Nargundkar, M., et al. (1992). Canadian Heart Health Surveys: A profile of cardiovascular risk: Survey methods and data analysis. Canadian Medical Association Journal. 146 (11 Suppl):1969-1974.

Mayo, N.E., Neville, D., Kirkland, S., Ostby, T., Mustard, C., Reeder, B.A., Joffres, M., Brauers,G., and Levy, A. (1996). Hospitalization and case-fatality rates for stroke in Canada from 1982 through 1991. The Canadian Collaborative Study Group of Stroke Hospitalizations. Stroke. 27(7):1215-20.

McDowell, N., McKenna, J., and Naylor, P.J. (1997). Factors that influence practice nurses to promote physical activity. British Journal of Sports Medicine. December.

McLean, S., Ebbesen, L.S., Green, K., Reeder, B., Butler-Jones D., Steer S. (2000). Continuing education for health promotion: A case study of needs assessment practice. Canadian Journal of University Continuing Education. 26(1)11-29.

Mitchell, T., and Gyorfi-Dyke, E. (1998). Prince Edward Island Heart Health Project – an integrated data analysis strategy. Edited by Susan J. Elliott. Proceedings from Qualitative Analysis in Process Evaluation for Heart Health Promotion workshop, Montreal, February 25–27, 1998.

Mitchell, T. and Gyorfi-Dyke, E. (1997). Awareness doesn't mean action. Health Promotion Atlantic. 3(4):3.

Mitchell, T. (1997). PEI Heart Health Project update. Health Promotion Atlantic. 3(3):2.

Muhajarine, N., Mustard, C., Roos, S.W., Young, T.K., and Gelskey, D.E. (1997). Comparison of survey and physician claims data for detecting hypertension. Journal of Clinical Epidemiology. 50(6):711-8.

Nguyen, M.N., Béland, F., and Otis, J. (1998). Is the intention to quit smoking influenced by the adoption of other heart-health lifestyle habits in 30 to 60 year old men? Addictive Behavior. 23:23-30.

Nguyen, M.N., Potvin, L., and Otis, J. (1997). Regular exercise in 30 to 60 year old men: Combining the stages-of-change model and the theory of planned behavior to identify determinants for targeting heart health interventions. Journal of Community Health. 22:233-246.

Nguyen, M.N., Potvin, L., Philibert, L., O'Loughlin, J., Moisan, J., and Paradis, G. (1996). La vente de tabac aux mineurs et la disponibilité d'aliments sains dans les dépanneurs des milieux rural, de banlieue et urbain du Québec. Revue Canadienne de Santé Publique. 86(6):377-379.

Nguyen, M.N., Béland, F., Potvin, L., and Otis, J. (1996). Diet and exercise profiles of 30 to 60 year-old male smokers: Implications for community heart health programs. J Community Health. 21:107-119.

Nguyen, M.N., Otis, J., Potvin, L. (1996). Determinants of intention to adopt a low-fat diet in men 30 to 60 years of age. Implication for heart health promotion. American Journal of Health Promotion. 10(3):201-207.

Nguyen, M.N., Grignon, R., Tremblay, M., and Pelisle, I. (1995). Behavioral diagnosis of 30 to 60 year-old men in the Fabreville Heart Health Program. Journal of Community Health. 20:257-269.

Nguyen, M.N., Potvin, L., and Otis, J. (1995). Le règlement municipal régissant l'usage du tabac est-il applique a Laval, Québec? Revue Canadienne de Santé Publique. 86:266-268.

Nguyen, M.N., Potvin, L., O'Loughlin, J., Philibert, L., Moisan, J., Paradis, G., and Tremblay, M. (1995) L'epicerie aide-t-elle le consommateur à choisir les aliments qui favorisent la santé du coeur? Une etude exploratoire. Revue Canadienne de Santé Publique. 86(3):185-187.

Nolan, C., Gray-Donald, K., Shatenstein, B., and O'Loughlin, J. (1996). Dietary patterns leading to high fat intake. Canadian Journal of Public Health. 86:389-91.

O'Connor, B.A. (1993). Heart health for all: A science and policy agenda for cardiovascular disease prevention – North American perspective. Proceedings of the First International Heart Health Conference. The Canadian Journal of Cardiology. May, 9 (Supplement D).

O'Loughlin, J., Kishchuk, N., Tremblay, M., McDonald, P., Bujold, M., Paradis, G. (in press). The hardest thing is the habit: a qualitative investigation of adolescent smokers' experience of nicotine dependence. Tobacco Nicotine Research.

O'Loughlin, J., Elliott, S., Cameron, R., Eyles, J., Harvey, D., Robinson, K., Hanusaik, N. (in press). From diversity comes understanding – An overview of nine provincial initiatives for health promotion capacity-building and dissemination research in Canada. Promotion and Education.

O'Loughlin, J., Makni, H., Tremblay, M., LaCroix, C., Gervais, A., Dery, V., Paradis, G. (in press). Smoking cessation-counseling practices of general practitioners in Montreal. Preventive Medicine.

O'Loughlin, J., Paradis, G., Meshefedjian, G., Gray-Donald, K. (2000). A five-year trend of increasing obesity among elementary schoolchildren in multiethnic, low-income, inner-city neighborhoods in Montreal, Canada. Int J Obes Relat Metab Disord; 24:1176-82.

O'Loughlin, J., Gray-Donald, K., Paradis, G., Meshefedjian, G. (2000). One and two-year predictors of excess weight gain among elementary school-children in multiethnic, low-income, inner-city neighborhoods. American Journal of Epidemiol; 152:739-46.

O'Loughlin, J., Paradis, G., Gray-Donald, K., Renaud, L. (1999). The impact of a community-based heart disease prevention program in a low-income, inner-city neighborhood. American Journal of Public Health; 89:1819-1826.

O'Loughlin, J., Paradis, G., Kishchuk, N., Barnett, T., Renaud, L. (1999). Prevalence and correlates of physical activity behaviours among elementary schoolchildren in multiethnic, low income, inner-city neighbourhoods. Annals Epidemiology;7:397-407. (Accompanying editorial: Annals Epidemiology; 98:394-396).

O'Loughlin, J., Masson, P., Déry, V., Fagnan, D. (1999). The role of community pharmacists in health education and disease prevention: a survey of their interests and needs in relation to cardiovascular disease. Preventive Medicine;28:324-31.

O'Loughlin, J., Paradis, G., Renaud, L., Meshefedjian, G., and Gray-Donald, K. (1998). Prevalence and correlates of overweight among elementary school children in multiethnic, low income, inner-city neighbourhoods in Montreal, Canada. Annals Epidemiology, 8:422-432.

O'Loughlin, J., Renaud, L., Paradis, G., Meshefedjian, G., and Zhou, X. (1998). Prevalence and correlates of early smoking among elementary school children in multiethnic, low income, inner-city neighbourhoods: Implications for smoking prevention. Annals Epidemiology, 8:308-318.

O'Loughlin, J., Paradis, G., Renaud, L., and Sanchez Gomez, L. (1998). One-year predictors of smoking initiation and progression among elementary school children in multiethnic, low income, inner-city neighbourhoods. Tobacco Control ,7:268-275.

O'Loughlin, J., Paradis, G., Meshefedjian, G., and Kishchuk, N. (1998). Evaluation of an eight-week mailed healthy weight intervention. Preventive Medicine, 27:288-295.

O'Loughlin, J., Renaud, L., Richard, L., Sanchez-Gomez, L., and Paradis, G. (1998). Correlates of the sustainability of community-based heart health promotion interventions. Preventive Medicine, 27:702-712.

O'Loughlin, J., Paradis, G., Renaud, L., Meshefedjian, G., and Barnett, T. (1997). The "Yes I Quit" smoking cessation course: Does it help women in a low-income community quit? Journal Community Health, 22:451-468.

O'Loughlin, J., Paradis, G., and Meshefedjian, G. (1997). Evaluation of two strategies for heart health promotion by direct mail in a low-income urban community. Preventive Medicine, 26:745-753.

O'Loughlin, J., Ledoux, J., Barnett, T., and Paradis, G. (1996). La commande du coeur (Shop for your heart): A point-of-choice nutrition education campaign in a low-income, low education urban neighbourhood. American Journal of Health Promotion, 10(3):192-195.

O'Loughlin, J., Renaud, L., and Paradis, G. (1996). Screening school personnel for cardiovascular disease risk factors: Short term impact on behaviour and perceived role as promoters of heart health. Preventive Medicine, 25:660-667.

O'Loughlin, J., Paradis, G., Kishchuk, N., Gray-Donald, K., Renaud, L., Fines, P., and Barnett, T. (1995). Evaluation of the Coeur en Santé St-Henri Heart Health Promotion Program: Design and methods. Journal of Epidemiology and Community Health, 49:495-502.

Palaniappan U, Jacob Starkey L, O'Loughlin J, Gray-Donald K. (2001). Dietary patterns of smokers and non-smokers in the Foods Habits of Canadians study. Journal of Nutrition, 131:1952-8.

Paradis, G., Dagenais, G.R., and Chockalingam, A. (1997). Disheartening developments on the world stage. Canadian Medical Association Journal, 157(12): 1659-1660.

Paradis, G., O'Loughlin, J., Elliott, M., Masson, P., Renaud, L., Sacks Silver, G., and Lampron, G. (1995). Coeur en santé St-Henri: A heart health programme in a low income, low education urban neighborhood in Montreal, Canada: Theoretical model and early field experience. Journal of Epidemiology and Community Health, 49:503-512.

Paradis, G., O'Loughlin, J., and Potvin, L. (1995). La promotion de la santé du coeur au Québec et au Canada : L'influence toujours présente du modèle de la Carélie du Nord. Union Med Canada, 124(2):1-6.

Pelletier, J., Moisant, J., Roussel, R., and Gilbert, M. (1997). Heart health promotion: A community development experiment in a rural area of Quebec, Canada. Health Promotion International, 12:291-298.

Potvin, L., Richard, L., Edwards, A.C. (2000). Knowledge of cardiovascular risk factors among the Canadian population: Relationships with indicators of socioeconomic status. Canadian Medical Association Journal, 162 (9 Suppl): S13-S24, 2000

Potvin, L., Gauvin, L., and Nguyen, N.M. (1997). Prevalence of stages of change for physical activity in rural, suburban and inner-city communities. Journal of Community Health, 22:1-13.

Potvin, L., Paradis, G., and Lessard, R. (1994). Le paradoxe de l'evaluation des programmes communautaires multiples de promotion de la santé. Ruptures, 1:45-57.

Potvin, L., Paradis, G., Laurier, D., Masson, P., Pelletier, J., and Lessard, R. (1992). Le cadre d'intervention du projet Québécois de démonstration en santé du coeur. Hygie, XI:17-23.

Rabkin, S., Chen, Y., Leiter, L., Liu, L., and Reeder, B.A., The Canadian Heart Health Surveys Research Group. (1997). Risk factor correlates of body mass index. Canadian Medical Association Journal, 157(1 Suppl):S26-S31).

Rabkin, S., Chen, Y., Leiter, L., and Reeder, B.A. (1994). Risk factor correlates of body mass index in Canada. (abstract). International Journal of Obesity, 18(Suppl 2):100.

Reeder, B.A., Chen, Y., Macdonald, S., Angel, A., and Sweet, L., -The Canadian Heart Health Surveys Research Group. (1997). Rural urban differences in obesity in Canada. Canadian Medical Association Journal, 157(1 Suppl):S10-S16).

Reeder, B.A., Senthilselvan, A., Despres, J.P., Angel, A., Liu, L., Wang, H., and Rabkin, S., -The Canadian Heart Health Surveys Research Group. (1997). The association of cardiovascular disease risk factors with abdominal obesity in Canada. Canadian Medical Association Journal, (1 Suppl):S39-S45.

Reeder, B.A., Khachatourians, L., Liu, L., and Horlick, L., Saskatchewan Heart Health Advisory Committee. (1996). Saskatchewan Heart Health Program: I. Saskatchewan Heart Health Survey. Saskatchewan Medical Journal, 7(4):4-8.

Reeder, B.A., Liu, L., and Horlick, L. (1996). Selective screening for dyslipidemia in a Canadian population. Journal of Clinical Epidemiology, 49(2):217-22.

Reeder, B.A., Liu, L., and Horlick, L. (1996). Socio demographic variation in the prevalence of cardiovascular disease in Saskatchewan: Results from the Saskatchewan heart health survey. Canadian Journal of Cardiology 12:271-77.

Reeder, B.A., Chen, Y., Macdonald, S., and Angel, A. (1994). Rural-urban difference in obesity in Canada (abstract). International Journal of Obesity, 18(Suppl 2):100.

Reeder, B.A., Angel, A., Ledoux, M., Rabkin, S.W., Young, T.K., and Sweet, L., The Canadian Heart Health Surveys Research Group.(1992).Obesity and its relationship to cardiovascular disease risk factors in Canadian adults. Canadian Medical Association Journal, 146(11): 2009-19.

Renaud, L., O'Loughlin, J., Paradis, G., Chevalier, S. (1998). Description d'un programme de promotion de la sante cardiovasculaire aupres des enfants 9-12 ans et de la communaute de St. Louis du Parc, Quebec. Sante Publique, 10:1-22.

Renaud, L. (1997). Coeur en Sante St-Louis du Parc, une collaboratrice-clé : L'Infirmiere, Actualités Professionnelles 1997 (fevrier), 20:5.

Renaud, L., Chevalier, S., Dufour, R., O'Loughlin, J., Beaudet, N., Bourgeois, A., and Ouellet, D. (1997). Evaluation de l'implantation d'un curriculum scolaire. Pistes d'interventions pour optimiser l'adoption et l'implantation de programmes d'éducation a la sante dans les ecoles primaires. Revue Canadienne de Sante Publique, Septembre-octobre, 88(5): 351-353.

Renaud, L., Chevalier, S., and O'Loughlin, J. (1997). L'institutionalisation des programmes communautaires : Revue des modeles theoriques et proposition d'un modele. Revue Canadienne de Sante Publique, 88(2):109-113.

Renaud, L., Dufour, R., and O'Loughlin, J. (1997). Intervenir localement selon les cinq axes de la Charte d'Ottawa: Défi de la Promotion de la Sante. Ruptures, 4:23-34.

Renaud, L., and Mannoni, C. (1997). Etude exploratoire sur la participation des parents dans les activites scolaires et parascolaires. Revue Canadienne de Sante Publique, 88(3):184-192.

Renaud, L., O'Loughlin, J., Lampron, G., Bonnev, D., Silver, G., Frangedakis, H., and Paradis, G. (1995). Un concours incite-t-il une communaute defavorisee a s'abstenir de fumer pendant 6 semaines ? Revue Canadienne de Sante Publique,86(3):170-175.

Renaud, L., Lampron, G., Kishchuk, N., O'Loughlin, J., Paradis, G., Sacks-Silver, G., Tapia, M., Bourgeois, A., and Sylvestre, M. (1994). Réflexions critiques au sujet d'un modele conceptuel transposé dans le design d'un programme communautaire et multifactoriel en promotion de la santé aupres des enfants. Promouvoir la Santé : Réflexions sur les Théories et les Pratiques. Collection PARTAGE. Réseau Francophone International pour la Promotion de la Santé, Québec, 1994.

Richard, L., O'Loughlin, J., Masson, P., Devost, S. (1999). Promoting heart healthy menus in restaurants in low-income neighbourhoods: A field experience. J Nutr Educ; 31:54-9.

Riley, BL. (in press 2001) Dissemination of heart health promotion in Ontario. Doctoral dissertation, School of Geography and Geology, McMaster University, Hamilton, Ontario

Riley, BL, Taylor, SM, Elliott, SJ (in press). Determinants of implementing heart health promotion activities in Ontario public health units: a social ecological perspective. Health Education Research.

Robinson, J.R., Young T.K., Roos, L.L., and Gelskey, D.E. (1997). Estimating the burden of disease: comparing administrative data and self-reports. Medical Care. 35(9):932-47.

Robinson, K., and Elliott, S.J. (2000). The practice of community development approaches in heart health promotion. Health Education Research. 15(2):219-231.

Robinson, K., and Elliott, S.J. (1999). Community development approaches to heart health promotion: A geographical perspective. Professional Geographer. 51(2): 283-295.

Roos, L.L., and Gelskey, D.E. (1993). Exploration of cardiovascular surgery outcomes in Manitoba and New England. Canadian Journal of Cardiology. 9:196D.

Saskatchewan Heart Health Coalition. (1997) Saskatchewan Heart Health Program: II. Demonstration Phase. Saskatchewan Medical Journal. 8(1):13-16.

Schabas, R. (1996). Promoting heart health promotion. Canadian Journal of Public Health. 87(S2):S54-S56.

Schabas, R., Cameron, R., and Taylor, S.M. (1994). Ontario Federal-Provincial Heart Health Project. Public Health and Epidemiology Report Ontario. 5(9):218-219.

Sevenhuysen, G., Fieldhouse, P., Young T.K., McNeil, C., Gelskey, D.E., and Macdonald, S.M. (1993). The Manitoba Nutrition Survey: Fat consumption data. Canadian Journal of Public Health. 84(6): 389-393.

Single Parent Association Heart Health Project (1995). Community Cooks (Profile of Cookbook). Chatelaine Magazine, September 1995 Issue.

Stachenko, S. (1996). The Canadian Heart Health Initiative: A countrywide cardiovascular disease prevention strategy. Journal of Human Hypertension. 10(Suppl 1):S5-8.

Stachenko, S. (1996). The Canadian Heart Health Initiative: Dissemination perspectives. Canadian Journal of Public Health. 87(Suppl 2):S57-9.

Stachenko, S. (1994). National opportunities for health promotion: The Canadian Experience. International Health Promotion Journal. 9(2):105-10.

Stachenko, S., and Petrasovits, A. (1993). [The Canadian Heart Health Initiative: From policy to putting into practice] La iniciativa de salud cardioovascular canadiense: desde la politica a la puesta en practica. Revista de sanidad e higiene publica. 67(2):117-23.

Stachenko, S. (1992). Towards a system for health: The heart health opportunity. Health Promotion Magazine. Health and Welfare Canada. 30:4.

Stachenko, S.J., Reeder, B.A., Lindsay, E., Donovan, C., Lessard, R., and Balram, C., -The Canadian Heart Health Surveys Research Group. (1992). Smoking prevalence and associated risk factors in Canadian adults. Canadian Medical Association Journal. 146(11):1989-96.

Steer, S., Hasselback, P., Knox, J.L., Mahaffey, S., Neilson, S., Reeder, B.A., Waterer, D., and Khachatourians, L. (1995). The Saskatchewan Heart Health Coalition: a journey towards heart Health. In: McDuffie, H., Dosman, J., Semchuk, K., Olenchock, S., Senthilselvan, S. (eds.): Agricultural Health and Safety: Workplace, Environment, Sustainability. CRC Press Inc., Lewis Publishers, Boca Raton, Florida, 1995(Suppl):277-81.

Taylor, S.M., Elliott, S.J., and Riley, B. (1998). Heart health promotion: Predisposition, capacity and implementation in Ontario Public Health Units, 1994-96. Canadian Journal of Public Health. 89(6): 410-414.

Taylor, S.M., Elliott, S.J., Robinson, K., and Taylor, S.J. (1998). Community-based heart health promotion: Facilitators and barriers. Canadian Journal of PublicHealth. 89(6): 406-409.

Thompson, D., Baugh Littlejohns, L., and Smith, N. with the Alberta Heart Health Project Team. (2000, in press). Caught in the web: Piloting a methodology to assess community capacity in a rural heart health project. Canadian Journal of Program Evaluation.

Tremblay M, Gervais A, Lacroix C, O'Loughlin J, Makni H, Paradis G. (in press). Physicians taking action against smoking: an intervention program to optimize smoking cessation counseling by Montreal practitioners. CMAJ.

Walker, R., Jolin, M.A., Elliott, S.J., and Taylor, S.M. (1997). Summary and implications of CHHIOP's main findings about heart health promotion in Ontario Public Health Units in 1994-95. Public Health and Epidemiology Report. Ontario Special Issue, 97(1):1-25.

Wang, H., Senthilselvan, A., Reeder, B.A., and Liu, L. (1994). Abdominal fat distribution and the clustering risk factors for cardiovascular disease. (abstract). International Journal of Obesity. 18(Suppl 2):122.

Wharf-Higgins, J. (1997). Who participates? Citizen participation in health reform in B.C. community organizing: Canadian experiences. Toronto, Ontario: Oxford University Press. 273-301.

Wharf-Higgins, J. (1996). Innovating Change: Applying the stages of change and diffusion of innovation theories to leisure programming, part II. Recreation Canada. 54(1): 2-5, 28.

Wharf-Higgins, J. (1995). Innovating change: applying the stages of change and diffusion of innovation theories to leisure programming, part I. Recreation Canada. 53(2): 22-24.

Wharf-Higgins, J., and Green, L. (1994). The APHA criteria for development of health promotion programs applied to four healthy community projects in British Columbia. Health Promotion International. 9(4): 311-320.

White, R.E., Shaffer, L., and MacLeod, E.B. (1993). PHI Heart Health: A framework for action. Proceedings of the International Heart Health Conference, Victoria, B.C. Canadian Journal of Cardiology, May(Supplement D): 68D-69D.

Young, T.K., and Gelskey, D.E. (1995). Is non-central obesity metabolically benign? Implications for prevention from a population survey. Journal of the American Medical Association. 274:1939-1941.

REPORTS

Alberta Heart Health Project Team. (in preparation). Creating healthy school communities through comprehensive school heart health: A school implementation guide.

Alberta Heart Health Project Team. (in preparation). Heart health in the workplace: Program development guide.

Alberta Heart Health Project Team. (in preparation). Handbook for heart health strategies in rural communities.

Alberta Heart Health Project Team. (in preparation). Handbook for building community capacity.

Alberta Heart Health Project Team. (in preparation). Handbook for assessing community capacity.

Alberta Heart Health Project Team. (1998). Evaluation Report: The Alberta Heart Health Project (July 1998)

Alberta Heart Health Project Team. (1998). The Bonnyville Climbing Wall Project: A community partnership to promote heart health (September 1998).

Alberta Heart Health Project Team. (1998). The Activity Zone - exercise your options: A community partnership to promote heart health (September 1998).

Baugh-Littlejohns, L., and Thompson, D. (1997). Final Report of Heart of the Land: An Alberta Heart Health Project. October 1993 – June 1997. Red Deer, Alberta.

Blair, L.E., and O'Connor, B. (1997). The British Columbia Heart Health Demonstration Project. Worldwide Efforts to Improve Heart Health: A Follow-up to the Catalonia Declaration - Selected Program Descriptions.

Blair, L.E., O'Connor, B., Naylor, P.J., Green, L.W., Frankish, J., and Rees, R. (1996). The British Columbia Heart Health Demonstration Project Evaluation: 1995/96 Coalition Report.

Blair, L.E., O'Connor, B., Naylor, P.J., Green, L.W., Frankish, J., and Rees, R. (1996). The British Columbia Heart Health Demonstration Project Evaluation: 1995/96 Provincial and Community Report.

Blair, L.E., DeMooy, J.M., Naylor, P.J., Green, L.W., Frankish, J., MacLeod-Williams, H., and O'Connor, B. (1996). Heart Health Information System: A tool for project management. Proceedings of the 4th International Conference on Information Technology and Community Health, University of Victoria, Victoria, BC. Pp 169-175.

The Canadian Heart Health Survey's Research Group. (1995). Canadians and heart health – reducing the risk. Ottawa: Health Canada, 1995.

Donovan, C., Laing, E., Neville, D., Swanson, E. (1996). Newfoundland and Labrador Heart Health Program Annual Report to NHRDP. June 1996.

Donovan, C., Laing, E., Neville, D., Swanson, E. (1996). Newfoundland and Labrador Heart Health Demonstration Phase Report. December 1996.

Elliott, S.J. (Ed.) (1998). Qualitative analysis in process evaluation for heart health promotion. Proceedings of a Workshop, Montreal, Quebec, February 25-27, 1998.

Elliott, S.J., Taylor, S.M., Wilson, K., Robinson, K., and Jolin, M.A. (1998). A qualitative study of factors affecting implementation of heart health promotion activities in Ontario Public Health Units, June 1998.

Elliott, S.J., Taylor, S.M., Robinson, K., and Taylor, S. (1996). A qualitative study of heart health promotion in Ontario Public Health Units, July 1996.

Federal/Provincial Working Group on the Prevention and Control of Cardiovascular Disease. (1987). Promoting heart health in Canada. Health and Welfare Canada.

Gelskey, D., Harvey, D., Hook, E., and Cepanec, D. (1998). Manitoba Heart Health Project progress and preliminary technical report. Manitoba Heart Health Project, University of Manitoba.

Gelskey, D.E., Macdonald, S.M., and Young T.K. (1991). Highlights report of the Manitoba Heart Health Survey. April, 1991. Department of Community Health Sciences, Faculty of Medicine, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Community-wide adult heart health behaviour survey: Ashern Report. Fall, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Community-wide adult heart health behaviour survey: Southwest Report. Fall, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Community-wide heart health behaviour survey: Springfield Report. Fall, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Community-wide heart health behaviour survey: Whitemouth Report. Fall, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Youth heart health behaviour survey: Springfield Report. Spring, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1998). Youth heart health behaviour survey: Whitemouth Report. Spring, 1998. Manitoba Heart Health Project, University of Manitoba.

Harvey, D., and Cepanec, D. (1997). Youth heart health behaviour survey: Ashern Report. Fall, 1997. Manitoba Heart Health Project, University of Manitoba.

Heart Health Nova Scotia. (1995). Report of the Program Demonstration Phase: 1989-1995. National Health Research and Development Program, Health Canada.

Heart Health Nova Scotia. (1994). The Working With Heart Worksite Program: Overview and Research Finding. Halifax, N.S.

Heart Health Nova Scotia. (1992). Scientific rationale and recommendations for improving the cardiovascular health of Nova Scotian adults. Report of the Expert Risk Factor Message Group, Public Education Working Group.

Hogan, K., Donovan, C., Swanson, E., Laing, E. (1995). Newfoundland and Labrador Heart Health Program Annual Report to NHRDP. May 1995.

Hogan, K., Donovan, C., Swanson, E., Laing, E. (1994). NLHHP Annual Report to NHRDP. May 1994.

Hogan, K., Donovan, C., Swanson, E., Thompson, G. (1993). NLHHP Annual Report to NHRDP. March 1993.

Jolin, M.A., and Walker, R. (1998). Selected results from the 1997 CHHIOP SCAN of Public Health Units: A Report for the Ontario Heart Health Resource Centre.

Jolin, M.A., and Walker, R. (1997). A Report of selected results from the 1996 CHHIOP SCAN of Public Health Units for the Ontario Heart Health Resource Centre, August, 1997.

Laing, E., Swanson, E. (1997). NLHHP activity update for annual health promotion division report. March, 1997.

Laing, E., Swanson, E. (1996). NLHHP activity update for annual health promotion division report. March 1996.

Laing, E., Swanson, E. (1995). NLHHP activity update for annual health promotion division report. March 1995.

Laing, E. (1995). Highlights of NLHHP For 1994-1995. September 1995.

Laing, E., Donovan, C., Hogan, K., Swanson, E., Neville, D., Doyle, G. (1995). Report of NLHHP's publications, presentations, products. October 1995.

Laing, E., Donovan, C. (1995). NLHHP progress report. October 1995.

Laing, E. (1994). Highlights of NLHHP activities 1993-1994. September 1994.

Lowe-Wickens, W., and Maloff, B. Annual reports, 1993-94, 1994-95, 1996-97.

Lowe-Wickens, W., and Maloff, B. (1994). CSHHP report to the Calgary Catholic Board of Education, May 1994.

Lowe-Wickens, W., and Maloff, B. (1993). CSHHP report to the Calgary Board of Health, December, 1993.

Lowe-Wickens, W., and Maloff, B. (n.d). Quarterly reports for the Alberta Heart Health Project, 4 per year over 4 Intervention years.

MacDonald, C., and Holmes, P. (2000). Dissemination research project report, April 1999 to March 2000. NLHHP Annual Report to NHRDP, March, 2000.

MacLean, D.R., and Petrasovits, A. (1990). Cost effectiveness of population and high risk strategies for the control of blood lipids. Background paper prepared for the Federal Provincial Working Group on Cardiovascular Disease Prevention and Control. Faculty of Medicine, Dalhousie University, Halifax, N.S.

McCarville, R., Cameron, R., Madill, C., and Walker, R. (1996). Social marketing of heart health: A literature review, report to Health Canada, March 21, 1996.

McCarville, R., Cameron, R., Jolin, M.A., Madill, C., and Walker, R. (1996). The role of social marketing in improving the heart health of Canadians, report to Health Canada, August 1996.

Neville, D., Donovan, C., Laing, E., Swanson, E. (1996). Newfoundland and Labrador Heart Health Final Evaluation Report. December 1996.

Neville, D., Hogan, K., Donovan, C., Swanson, E., Laing, E., Doyle, G. (1995). Newfoundland and Labrador Heart Health Program 4th year report and evaluation plan. October 1995.

Neville, D., Hogan, K., Donovan, C., Swanson, E., Laing, E. (1994). NLHHP Diffusion Plan. September 1994.

Newfoundland and Labrador Heart Health Program (1999). 1999 Benchmark Study: NLHHP. March, 1999

Nova Scotia Department of Health, Health and Welfare Canada, Nova Scotia Heart Health Program. (June 1992). Report of the Nova Scotia Nutrition Survey. Halifax, N.S.

Prince Edward Island Heart Health Project. 1999. Healthy communities in action. A plan for sustainability. Charlottetown: Department of Health and Social Services.

Prince Edward Island Heart Health Program (1997). Eastern Kings Health Study. Internal Technical Report. October 1997.

Report of the Working Group on the Prevention and Control of Cardiovascular Disease, Federal-Provincial Advisory Committee on Community Health, Department of National Health and Welfare, Canada. (February 1992). Promoting Heart Health in Canada: A Focus on Cholesterol.

Riley, B., for the CHHIOP Research Group (1995). 1994 SCAN: Implementation of heart health activities. June 1995.

Saskatchewan Heart Health Program. (1998). Technical Report 1 – Partnerships. Saskatoon: University of Saskatchewan, 1998.

Saskatchewan Heart Health Program. (1998). Technical Report 2 – Effective community strategies. Saskatoon: University of Saskatchewan, 1998.

Saskatchewan Heart Health Program. (1998). Technical Report 3 – Evaluation strategies. Saskatoon: University of Saskatchewan, 1998.

Saskatchewan Heart Health Program. (1998). Technical Report 4 – Dissemination strategies. Saskatoon: University of Saskatchewan, 1998.

Sooley, J., Swanson, E., Donovan, C., Laing, E. (1995). Newfoundland and Labrador Heart Health communications plan. March 1995.

Walker, R., and Jolin, M.A. for the CHHIOP Research Group (1998). Heart health promotion activity in community agencies: Results of the CHHIOP Survey, April 1998.

Walker, R., and Jolin, M.A. for the CHHIOP Research Group (1998). 1997 SCAN: heart health promotion activities in Ontario, September 1998.

Walker, R., and Jolin, M.A. for the CHHIOP Research Group (1997). 1996 SCAN: Implementation of heart health activities, July 1997.

Walker, R., and Jolin, M.A. for the CHHIOP Research Group (1997). 1996 SCAN: Public health practices supporting heart health, December 1997.

Walker, R. (1996). Summary Notes: Workshop on comparative analysis of dissemination research protocols, report to Health Canada, March 30, 1996.

Walker, R., for the CHHIOP Research Group (1996). 1994 SCAN: public health practices supporting heart health, June 1996.

Walker, R., and Elliott, S.J. (1996). Comparative analysis of heart health dissemination research protocols of four Canadian provinces, report to Health Canada, March 28, 1996.

White, R. (2000). Annual Report to NHRDP. Submitted June 30, 2000.

Young, T.K., Gelskey, D.E., Macdonald, S.M., et al. (1991). The Manitoba Heart Health Survey: Technical Report. Department of Community Health Sciences, Faculty of Medicine, University of Manitoba.

THESES AND DISSERTATIONS

Barnett, Tracie. (1997). Predictors of physical inactivity among elementary school children. M.Sc. Thesis. Département d'épidémiologie et biostatistique. Université McGill.

Bennell, Jane. (1994). An analysis of medical and non-medical factors of hypertension in women from the Manitoba Heart Health Survey. PhD. Dissertation. University of Manitoba.

Blair, T. (1996). Relationship of physical activity to selected cardiovascular disease risk factors in women. M.Sc. Thesis. University of Saskatchewan.

Chevalier, Sylvie. (1993). Analyse PRÉ-INTERVENTION DU PROJET "Fabreville, un environnement pour ton coeur": Identification des leaders d'une communauté. M.Sc. Thesis. Département de médecine sociale et préventive, Université de Montréal.

Filion, Gilbert. (1995). Évaluation de l'impact du jeu partie sur la lune. Département de Sociologie, UQUAM, cours de méthodologie.

Heath, S. (1998). a study to describe weight preoccupation among women. Master's Thesis. Department of Community Health and Epidemiology, Halifax, N.S., June 1998.

Hobeika, C. (1997). knowledge, behaviours, perceived barriers and facilitators in university females regarding heart health. MSc Thesis. Memorial University of Newfoundland. August 1997.

Jack, L. (1995). Physical activity in Saskatchewan's older population. M.Sc. Thesis. University of Saskatchewan.

Johnson-Down, Louise. (1996). A nutritional assessment of low-income and multi-ethnic children 9-12 years old and validation of alternative tools to measure fat intake. M.Sc. Thesis. Ecole de dietetique et de nutrition humaine, Université McGill.

Langille, D. (1995). Evaluation of stop smoking: A program for women. Master's Thesis. Department of Education. Dalhousie University, Halifax, N.S. December 1995.

Langlois, Sylvain. (1995). Developpement du jeu: Partie sur la lune, destine aux organismes communautaires. M.Sc. Thesis. Département Éducation, Université de Montreal.

Mackie, C. (1996). A study to investigate the factors contributing to the sustainability of community-based health promotion programs. Master's Thesis. Department of Community Health and Epidemiology, Halifax, N.S., December 1996.

Malinowski, C. (1996). A process evaluation of a self directed volunteer coordinating cardiovascular worksite health promotion program. M.Sc. Thesis. University of Saskatchewan.

Mannoni, Chantal. (1996). Etude sur la participation des parents dans les activités scolaires et para-scolaires. M.Sc. Thesis. Département de médecine sociale et preventive, Université de Montréal.

McFarlane, A. (1996). Changes in CVD risk factors and overall CVD risk status in a cohort of patients attending a multiple cvd risk factor reduction clinic. M.Sc. Thesis. University of Saskatchewan.

Nguyen, Nguyet M. (1995). Theorie du comportement planifie et planification des programmes de promotion en santé du coeur. Doctoral Dissertation. Departement de médecine sociale et préventive, Universite de Montreal.

Palaniappan, U., (1997). Efficacy of heart health intervention as assessed by dietary methodology. M.Sc. Thesis. University of Saskatchewan.

Robinson, K. (1997). The role of community development in heart health promotion in Ontario. M.A. Thesis. School of Geography and Geology, McMaster University, Hamilton, Ontario.

Sletter, M. (1998). A qualitative evaluation of "On the Move." M.Sc. Thesis. Department of Community Health and Epidemology, University of Saskatchewan, Saskatoon, Saskatchewan.

Zhou, Xiaoje. (1996). Prevalence and correlates of early smoking among elementary school children. Special project. Departement d'epidemiologie et biostatistique, Universite McGill.

CONFERENCE PRESENTATIONS

Barnett, T., O'Loughlin, J., Paradis, G., and Renaud, L. (1997). Reliability of proxy reports of parental smoking by elementary school children. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

Blair, I. (1998). Results from the process evaluation of the Canadian heart health initiative. The 3rd International Conference on Heart Health, Singapore, August 30-September 2, 1998.

Blair, I., Naylor, P.J., Green, L., and O'Connor, B. (1995). Early lessons in planning and supporting community heart health initiatives. The 2nd International Conference on Heart Health, Barcelona, Spain, May 28, 1995.

Butler-Jones, D., – Canadian Heart Health Surveys Research Group. (1998). The Canadian Heart Health Database. 3rd International Heart Health Conference, Singapore, August 29-September 2, 1998.

Butler-Jones, D., Green, K., McLean, S., Reeder, B., – Saskatchewan Heart Health Program. (1998). Into the next millennium: Disseminating heart health promotion capacity in Saskatchewan, Canada. 3rd International Heart Health Conference, Singapore, August 29-September 2, 1998.

Chen, Y., and Reeder, B.A. (1992). Obesity and cardiovascular risk factors in rural and urban adult residents in prairie Canada. 3rd International Symposium: Issues in Health Safety and Agriculture, Saskatoon, Saskatchewan, May 10-15, 1992.

Chockalingam, A., Reeder, B., MacLean, D.R., Stachenko, S., Borkowski, K.R., Krayacich, J., and Edwards, A. (1997). Prevalence of elevated serum cholesterol (LDL-C) and triglycerides (TG): The Canadian Heart Health Data. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Cogdon, A., Travers, K., Wright, C., McDonald, W., Anderson, B., Rideout, L., and MacLean, D.R. (1997). Examining the availability and cost of heart healthy dietary changes in Nova Scotia. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Ding, Y., Reeder, B.A., Faulkner, R., Bell, R., and Haennel, R. (1993). Physical activity in patients with a history of stroke: Saskatchewan Heart Health Survey, 1989-1990. International Conference on Stroke Prevention and Epidemiology, Saskatoon, Saskatchewan, October 14-16, 1993.

Dyck, R.J. (1998). Sustainability of heart health promotion during Reform. 3rd International Heart Health Conference, Singapore, August 1998 (Accepted but not presented).

Ebbesen, L.S., Reeder, B.A., Feather, J., Steer, S.L., and Neilson, S.D. (1995). Saskatchewan heart health program evaluation. 1st International Evaluation Conference, Vancouver, British Columbia, November 1-5, 1995.

Ebbesen, L.S., Steer, S.L., Bailey, D., Lazar, F., Tyerman, E., and Worth, L. (1995). Heart to heart: Canadian style. 2nd International Heart Health Conference Barcelona, Spain, May 28-June 1, 1995.

Ebbesen, L., Reeder, B.A., Knox, J., Neilson, S., Steer, S.L., Mansour, A., and Rutherford, L. (1993). Community-based cardiovascular disease and stroke prevention in Saskatchewan. International Conference on Stroke Prevention and Epidemiology, Saskatoon, Saskatchewan, October 14-16, 1993.

Elliott, S.J., O'Loughlin, J., Petrasovits, A., and Edwards, A.C. (1998). Qualitative standards of documentation of heart health interventions: Development and dissemination of the G7 Heart Health Projects Database. 3rd International Heart Health Conference, Singapore, August 30-September 2, 1998.

Elliott, S.J., Cameron, R., and Taylor, S.M. (1998). Dissemination and deployment: The Canadian Heart Health Initiative research agenda. 3rd International Heart Health Conference, Singapore, August 30-September 2, 1998.

Farquharson, J. (1996). The role of the nurse in preventing noncommunicable diseases. Second World Meeting of CINDI, February 14-16, 1996.

Farquharson, J. (1996). Targeting heart health Nova Scotia. Targeting health and social need school of nursing. The Queen's University of Belfast, Northern Irelaad, February 15, 1996.

Farquharson, J., MacLean, D. Heath, S., and McDermott, N. (1997). Worksite heart health: Process and results of a pilot program. 4th International Conference on Preventive

Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Farquharson, J. (1992). Worksite CVD programs in the Canadian Heart Health Initiative. International Heart Health Conference, Victoria, British Columbia, May 28, 1992.

Farquharson, J., White, R., White, D., MacLeod, E., Gelskey, D., McDermott, N., Shaffer, L., and MacLean, D. (1992). Canadian Heart Health Initiative workplace programs. The International Heart Health Conference, Victoria, British Columbia, May 1992.

Gelskey, D.E., Harvey, D., and Hook, E. (1997). Community capacity building Manitoba Style: Manitoba Heart Health Project. 4th International Conference on Preventative Cardiology, Montreal, Quebec, June 28, 1997.

Heath, S., Dickinson, M., Cogdon, A., Farquharson, J., Hood, R., Salley, L., and MacLean, D.R. (1998). Investigating organizational capacity for heart health promotion. 3rd International Heart Health Conference, Singapore, August 1998.

Heath, S., Farquharson, J., Hoddinott, N., Murphy, G., Cervin, C., Langille, D., and Freeman, A. (1997). Evaluation of a women-centred smoking cessation program. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Heath, S., Whitehouse, E., Urquhart, K., MacIntosh, S., and McDermott, N. (1993). Worksite health promotion - Working with Heart program. International Summer School on the Prevention of Noncommunicable Disease, Halifax, N.S., July 1993.

Hood, R., MacLean, D.R., Neuman, K., Cogdon, A., Heath, S., and Farquharson, J. (1998). Heart Health behavioral risk factor monitoring in Nova Scotia, Canada. 3rd International Heart Health Conference, Singapore, August 1998.

Hood, R., Farquharson, J., Heath, S., Cogdon, A., and MacLean, D. (1997). Heart Health dissemination and its research in Nova Scotia. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Hood, R., and Irwin, M. (1997). Urging young men to cut back on fat. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Knox, L.J., and Reeder, B.A. (1992). The Saskatchewan Heart Health Program - Community approaches. International Heart Health Conference, Victoria, British Columbia, May 23-28, 1992.

Lampron, G., O'Loughlin, J., Elliott, M., Masson, P., Silver, G., Paradis, G., and Renaud, L. (1994). "Oui, j'arrête": Des ateliers pour cesser de fumer specialement adaptes aux milieux défavorisés. 9th World Conference on Tobacco and Health, Paris, October 10-14, 1994.

Laurier, D., Tremblay, M., Nguyen, N., and Dedobbeleer, N. (1992). Fabreville: An ecological approach. Conference Internationale en Santé du Coeur, Victoria, B.C., 24-28 mai 1992.

Liu, L., Reeder, B.A., Shuaib, A., and Mazagri, R. (1993). Validity of stroke diagnosis in Saskatchewan. 3rd International Conference on Preventive Cardiology, Oslo, Norway, June, 27-July 1, 1993.

Liu, L., Reeder, B.A., and Khachatourians, L. (1992). The adequacy of screening for total cholesterol. International Heart Health Conference, Victoria, British Columbia, May 23-28, 1992.

Lowe-Wickens, W., and Maloff, B. (1998). CSHHP implementation model. 3rd International Heart Health Conference, Singapore, August 1998.

MacLean, D.R., Farquharson, J., Cogdon, A., Heath, S., Salley, L., Hood, R., and Dickinson, M. (1998). Operationalizing heart health dissemination research. 3rd International Heart Health Conference, Singapore, August 1998.

MacLean, D.R., Farquharson, J., Hood, R., Cogdon, A., and Kephart, G. (1997). What a difference a decade makes: Estimating change in CVD risk in the Nova Scotia population. 4th International Conference on Preventive Cardiology jointly with the 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, Quebec, June 29-July 3, 1997.

Mansi, O., Potvin, L., Paradis, G., and Gauvin, L. (1997). Relationship among community contexts, family environments, individual characteristics and smoking patterns. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

Morsan, J., Potvin, L., Philibert, L., and Strychar, I. (1993). Validation of a food frequency questionnaire for assessing dietary fat intake. 3rd International Conference on Preventive Cardiology, Oslo, Norvège, 27 juin-1er juillet 1993.

Naylor, P.J., Webster, A.L., and Barker, M. (1995). The Impact of a point-of choice poster campaign on stair-climbing behavior in a work site setting. The 2nd International Conference on Heart Health, Barcelona, Spain, May 28, 1995.

Nguyen, M.N., Potvin, L., and Otis, J. (1995). Application of the theory of planned behavior and the transtheoretical model in studying physical activity in men aged 30 to 60 years Old. International Heart Health Conference, Barcelone, Espagne, 28 mai-1er juin 1995.

O'Connor, B. (2001). The Canadian Heart Health Initiative: Lessons learned. 1st National CDC Prevention Conference on Heart Disease and Stroke, Atlanta, U.S.A., August 22-24.

O'Connor, B. (2001). The Canadian Heart Health Initiative: Policy in action. 4th International Heart Health Conference, Osaka, Japan, May 27-31.

O'Connor, B. (2001). Promoting Good Heart Health: Practices through telematics. 4th International Heart Health Conference, Osaka, Japan, May 27-31.

O'Connor, B. (2001). Marketing heart health. 4th International Heart Health Conference, Osaka, Japan, May 27-31.

O'Connor, B. (2000). Marketing the heart health vision. Pan American Health Organization Workshop, Halifax, Canada, November 6-7.

O'Connor, B. (2000). The preventive dose. 13th Canadian Heart Health Network Meeting, Vancouver, Canada, October 30-November 1.

O'Connor, B. (2000). Blood pressure: The public health challenge. Canadian Public Health Association, Coalition on High Blood Pressure, Ottawa, Canada, October 22.

O'Connor, B. (1999). Diabetes and cardiovascular disease. International Conference on Diabetes and Cardiovascular Disease, Winnipeg, Manitoba, Canada, June 3-6.

O'Connor, B. (1999). Mobilizing heart health for the eradiction of smoking: British Columbia experience. 2nd European Conference on Tobacco or Health, Canary Islands, Spain, February 23-27.

O'Connor, B. (1999). Determinants of health: Implications for heart health. Ontario Heart Health Conference, Toronto, Canada, November 1-2.

O'Connor, B. (1998). The CHHI: Lessons for the U.S. CVD program. 13th National Conference on Chronic Disease Prevention and Control, Atlanta, U.S.A., December 7-9.

O'Connor, B. (1998). Strategies in social marketing in heart health. The 3rd International Conference on Heart Health, Singapore, August 30-September 2, 1998.

O'Connor, B. (1997). The Canadian Heart Health Initiative: A countrywide cardiovascular disease prevention research and demonstration program. 4th International Conference on Preventive Cardiology, Montreal, Canada.

O'Connor, B. (1992). Science, policy and community: The three pillars of heart health. 1st International Heart Health Conference, Victoria, Canada.

O'Connor, B. (1992). Heart health for all for the year 2000: A science and policy agenda for cardiovascular disease prevention: North American perspectives. 1st International Heart Health Conference, Victoria, Canada.

O'Connor, B. (1992). Focus on cholesterol: The Canadian position. Quebec Symposium – Focus on Cholesterol, Montreal, Canada.

O'Loughlin, J., Paradis, G., and Meshefedjian, G. (1997). Evaluation of two strategies for heart health promotion by direct mail in a low-income community. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

O'Loughlin, J., Paradis, G., Renaud, L., Meshefedjian, G., and Gray-Donald, C. (1997). Prevalence and correlates of overweight and obesity among multi-ethnic school children in low-income, inner-city neighbourhoods. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

O'Loughlin, J., Paradis, G., Stachenko, S., Lessard, R., Balram, C., and Wilson, E. (1997). Motives and methods for weight control among smokers: Implications for smoking cessation interventions. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of The Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

O'Loughlin, J., Renaud, L., Paradis, G., Meshefedjian, G., and Zhou, X. (1997). Prevalence and correlates of early smoking among elementary school children in multi-ethnic low-income, inner-city neighbourhoods. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

O'Loughlin, J., Renaud, L., Richard, L., Sanchez, L., Paradis, G. (1997). Correlates of the sustainability of community-based heart health promotion interventions. 4th International Conference on Preventive Cardiology and 37th Annual Meeting of the Council on Epidemiology and Prevention, American Heart Association, Montreal, June 29-July 3, 1997.

O'Loughlin, J., Renaud, L., Paradis, G., Meshefedjian, G., and Barnett, T. (1996). The "Yes I Quit" smoking cessation course: Does it help women in a low-income community quit? Smoketree Europe, Conference on Tobacco or Health, Helsinki, Finland, October 2-4, 1996.

O'Loughlin, J., Renaud, L., Paradis, G., Meshefedjian, G., Zhou, X. (1996). Prevalence and correlates of early smoking among elementary school children in multiethnic, low-income,inner-city neighbourhoods. Smoketree Europe, Conference on Tobacco or Health, Helsinki, Finland, October 2-4, 1996.

O'Loughlin, J., Paradis, G., Kishchuk, N., Gray-Donald, K., Richard, L., and Houde, M. (1993). Evaluation of a multi-factorial, community-based heart promotion program in a low-income urban neighbourhood: Results from the baseline survey. 3rd International Conference on Preventive Cardiology, Oslo, Norway, June 27-July 1, 1993.

O'Loughlin, J., Lampron, G., Laforest, S., and Paradis, G. (1992). Oui, j'arrête (a smoking cessation course for the socio-economically disadvantaged). International Heart Health Conference, Victoria, B.C., May 24-28, 1992.

O'Loughlin, J., Lampron, G., Masson, P., Renaud, L., Kishchuk, N., Sacks-Silver, G., and Paradis, G. (1992). Heart health promotion among multiethnic youth in a low SES urban community. International Heart Health Conference, Victoria, B.C., May 24-28, 1992.

O'Loughlin, J., Masson, P., Elliott, M., Laforest, S., and Paradis, G. (1992). Mangeons en coeur: Heart healthy eating for the socio-economically disadvantaged. International Heart Health Conference, Victoria, B.C., May 24-28, 1992.

O'Loughlin, J., Masson, P., Sacks-Silver, G., Lampron, G., and Paradis, G. (1991). La promotion de la sante du coeur auprès des jeunes d'un milieu multiethnique defavorise. 2e Colloque International Francophone en Promotion de la Sante, Montreal, 10-11 Octobre 1991.

Paradis, G., O'Loughlin, J., Renaud, L., and Sanchez Gomez, L. (1998). One-year predictors of smoking onset in elementary school children in multiethnic, low-income, inner-city neighbourhoods. XIII World Congress of Cardiology, Rio de Janeiro, Brazil, April 26-30, 1998.

Paradis, G., O'Loughlin, J., Elliott, M., Lampron, G., Lapierre, L., Hubert, M., Devost, S., Sylvestre, M., and Houde, M. (1993). Are we preaching to the converted? A comparison of participants and non-participants in community heart health promotion. 3rd International Conference on Preventive Cardiology, Oslo, Norway, June 27-July 1, 1993.

Paradis, G., O'Loughlin, J., Kishchuk, N., Renaud, L., Masson, P., Lampron, G., and Sacks Silver, G. (1992). Community mobilization for heart health: Example from the coeur en Santé St-Henri project. International Heart Health Conference, Victoria, B.C., May 24-28, 1992.

Paradis, G., Potvin, L., Laurier, D., Masson, P., Pelletier, J., and Lessard, R. (1992). The Quebec Heart Health demonstration project: A model of community and family mechanisms for behaviour change. International Heart Health Conference, Victoria, B.C., May 24-28, 1992.

Paradis, G., O'Loughlin, J., Masson, P., Silver, G., Kishchuk, N., Lampron, G., and Elliott, M. (1991). Coeur en sante St-Henri: Un projet multifactoriel de promotion de la sante du coeur en milieu urbain defavorise. 2e Colloque international Francophone en Promotion de la Sante, Montreal, October 10-11, 1991.

Pelletier, J., Moisan, J., and Belanger, D. (1992). Heart health promotion in a Quebec rural area: A community concern. International Heart Health Conference, Victoria, B.C., May 24-28, 1992.